CECOS International, Inc.

Aber Road, Williamsburg, Ohio Facility

2021 Annual TSCA Report

EPA ID No. 087433744

5092 Aber Road
Williamsburg, OH 45176

May 2022

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SECTION I:
TSCA MONITORING ANALYTICAL RESULTS

SECTION I: TSCA MONITORING ANALYTICAL RESULTS

The TSCA Annual Report summarizes analytical results related to TSCA monitoring for 2021. Section I is organized as follows:

Section I, Part A – Analytical Review and Attachments

Part A includes a review of the monitoring programs at the CECOS facility. The RCRA portion of the facility is monitored by the Detection Monitoring Program (DMP) under the authority of Ohio EPA and the approved post closure plan. The pre-RCRA area of the site began to follow the Corrective Measures Implementation (CMI) Performance Monitoring Requirements under the authority of USEPA Region V in July of 1998. All the monitoring wells sampled under the DMP and CMI programs are also sampled for the TSCA parameters Total Organic Carbon (TOC) and Polychlorinated Biphenyls (PCBs). In addition, underdrains, leak detectors and streams are sampled quarterly for TSCA parameters.

The 2021 analytical review and statistical evaluation narratives are provided for reference in Attachment I of Part A of this section. The semi-annual CMI Performance Monitoring Evaluations have also been provided for reference (Attachment II of Part A). A summary of the 2021 analytical results for the TSCA parameters are also included.

Section I, Part B – 2021 TSCA Groundwater Monitoring Analytical Results

This section is comprised of quarterly TSCA monitoring analytical results (January, April, July and October sampling events) and abridged DMP analytical results (April and October sampling events). Quarterly reports have been previously submitted to the USEPA and therefore the DMP/TSCA data is only tabulated in summary tables for this report.

Section I, Part C – Other 2021 TSCA Monitoring Analytical Results

This section lists all other TSCA monitoring locations: Streams (C), Underdrains (U), Leak Detectors (LD), and the Leachate Treatment System Effluent. Analytical results have been presented chronologically by sample category.

SECTION I
PART A

ANALYTICAL REVIEW AND ATTACHMENTS

SECTION I, PART A – ANALYTICAL REVIEW AND ATTACHMENTS

Introduction

Part A includes a review of the monitoring programs at the CECOS facility. The RCRA portion of the facility is monitored by the DMP under the authority of Ohio EPA and the approved March 2019 DMP/Post Closure Plan. The pre-RCRA area of the site began to follow the Corrective Measures Implementation (CMI) Performance Monitoring Requirements under the authority of USEPA Region V in July of 1998. All the monitoring wells sampled under the DMP and CMI programs are also sampled for TSCA parameters. In addition, underdrains, leak detectors and the streams are sampled for TSCA parameters.

Discussion

Analytical results and evaluations for the monitoring activity have been previously reported with the associated reports. The dates of the 2021 report submittals are February 16, 2021, May 25, 2021, August 18, 2021, and November 18, 2021. The 2021 analytical review and statistical evaluation narratives are provided for reference (Part A, Attachment I). In summary, no PCBs were detected at or above their respective practical quantitation limits in any of the monitoring wells, surface water locations, underdrains, or leak detectors monitored in accordance with the DMP or CMI monitoring programs. Further, there were no confirmed detections of VOCs at or above their respective practical quantitation limits in samples collected from surface water locations, leak detectors, or any of the underdrains located outside the slurry wall during the 2021 sampling events. As such, the extent of VOC groundwater impact remains limited to the corrective measures area within the boundary and control of the slurry wall. The semi-annual CMI Performance Monitoring Evaluations have also been provided for reference (Part A, Attachment II). A summary of the 2021 analytical results for the TSCA parameters are also included.

SECTION 1
PART A
ATTACHMENT I

MONITORING PROGRAM
ANALYTICAL EVALUATIONS

FIRST QUARTER 2021 MONITORING REPORT

February 16, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

February 16, 2021

VIA EMAIL
Ms. Lisa Graczyk
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
January 2021 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Ms. Graczyk:

Please find the attached Quarterly Monitoring Report for the January 2021 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the January 2021 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

JANUARY 2021 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

February 2021

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

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1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the January 2021 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The January 2021 quarterly monitoring sampling event was performed January 11, 12, and 13, 2021. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). As discussed above, samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the January 2021 event and were sampled for VOCs, PCBs, and TOC.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1)

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the January 2021 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the January 2021 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

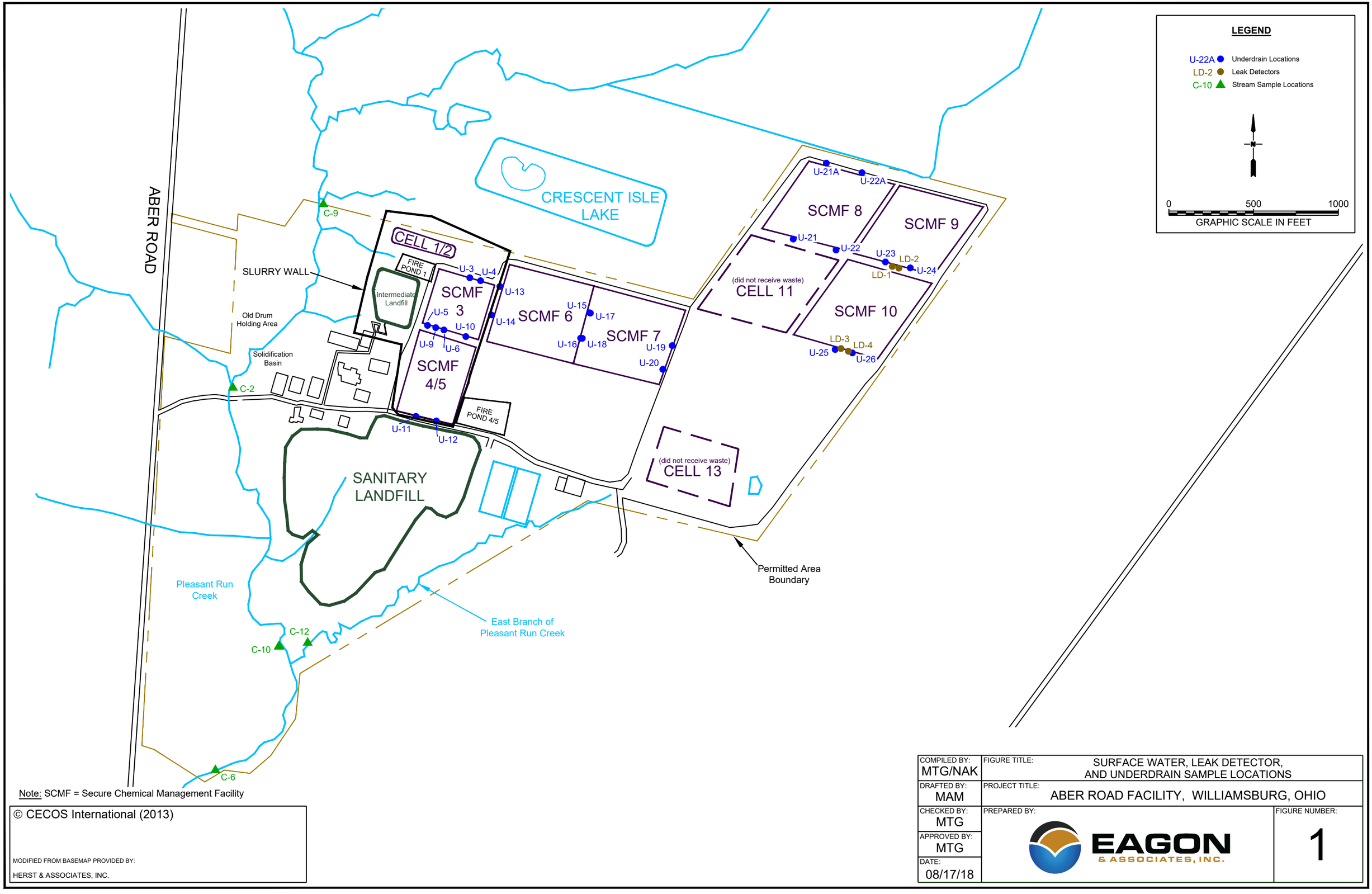
There were no detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the January 2021 event. In addition, there were no detections of VOCs in the surface water samples.

VOC detections in the January 2021 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the January 2021 quarterly monitoring event, including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



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MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

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TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
JANUARY 2021 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	27
	1,2-Dichloroethene (Total)	21
	Vinyl Chloride	1.4
U-4[1]	1,1-Dichloroethane	6.7
	1,2-Dichloroethene (Total)	25
	Vinyl Chloride	2.1
U-5[1]	1,1-Dichloroethane	6.8
	1,2-Dichloroethene (Total)	21
	Vinyl Chloride	1.3
U-6[1]	1,1-Dichloroethane	21
	1,2-Dichloroethene (Total)	14
Dup TSCA #1 (U-6)[1]	1,1-Dichloroethane	20
	1,2-Dichloroethene (Total)	13
U-12[1]	1,2-Dichloroethene (Total)	10
	Vinyl Chloride	2.0

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

SECOND QUARTER 2021 MONITORING REPORT
May 25, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

May 25, 2021

VIA EMAIL
Ms. Lisa Graczyk
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
April 2021 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Ms. Graczyk:

Please find the attached Quarterly Monitoring Report for the April 2021 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the April 2021 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains. Included in the report are results from limited supplemental sampling performed in May 2021 in response to shipping delays and subsequent holding time exceedances for several samples submitted to the laboratory in April. It is noted that there were two suspect, low-level detections of 1,2-dibromoethane (EDB) in underdrain samples U-19 and U-23 located outside the slurry wall during the event. Those detections are believed to be the result of laboratory error or field or laboratory cross-contamination and will be further investigated during the routine quarterly monitoring event scheduled for July 2021.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

APRIL 2021 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

May 2021

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

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1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the April 2021 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The April 2021 quarterly monitoring sampling event was performed April 5, 6, and 7, 2021. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility. As the result of a shipping delay and internal miscommunication at the laboratory, several samples for volatile organic compounds (VOCs) were not analyzed within method holding times and were discarded. The affected samples were from underdrain locations U-3, U-5, and U-6, and surface water locations C-2, C-6, C-9, C-10, and C-12. Therefore, supplemental sampling for VOCs was completed at those locations on May 12, 2021.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the

Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that

could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). As discussed above, samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the April event and were sampled for VOCs, PCBs, and TOC. All five locations were also flowing during the May 2021 supplemental sampling event (VOCs only).

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1).

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the April 2021 quarterly monitoring event. No leak detectors were sampled during the supplemental event in May 2021.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the April 2021 quarterly monitoring event. Supplemental sampling for VOCs at underdrains U-3, U-5, and U-6 was completed during the May 2021 sampling event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

There were no detections of VOCs in the surface water samples. In addition, there were no detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the April 2021 event, with the exception of anomalous, low-level detections of 1,2-dibromoethane (syn. ethylene dibromide or EDB) reported for underdrains U-19 (0.012 ug/L) and U-23 (0.018 ug/L). The analytical method detects down to parts per trillion levels and the reported concentrations were well below the maximum contaminant level of 0.05 ug/L for EDB. The concentrations were also only nominally above the laboratory practical quantitation limits of 0.010 (U-19) and 0.011 (U-23) and the method detection limits of 0.0075 (U-19) and 0.0076

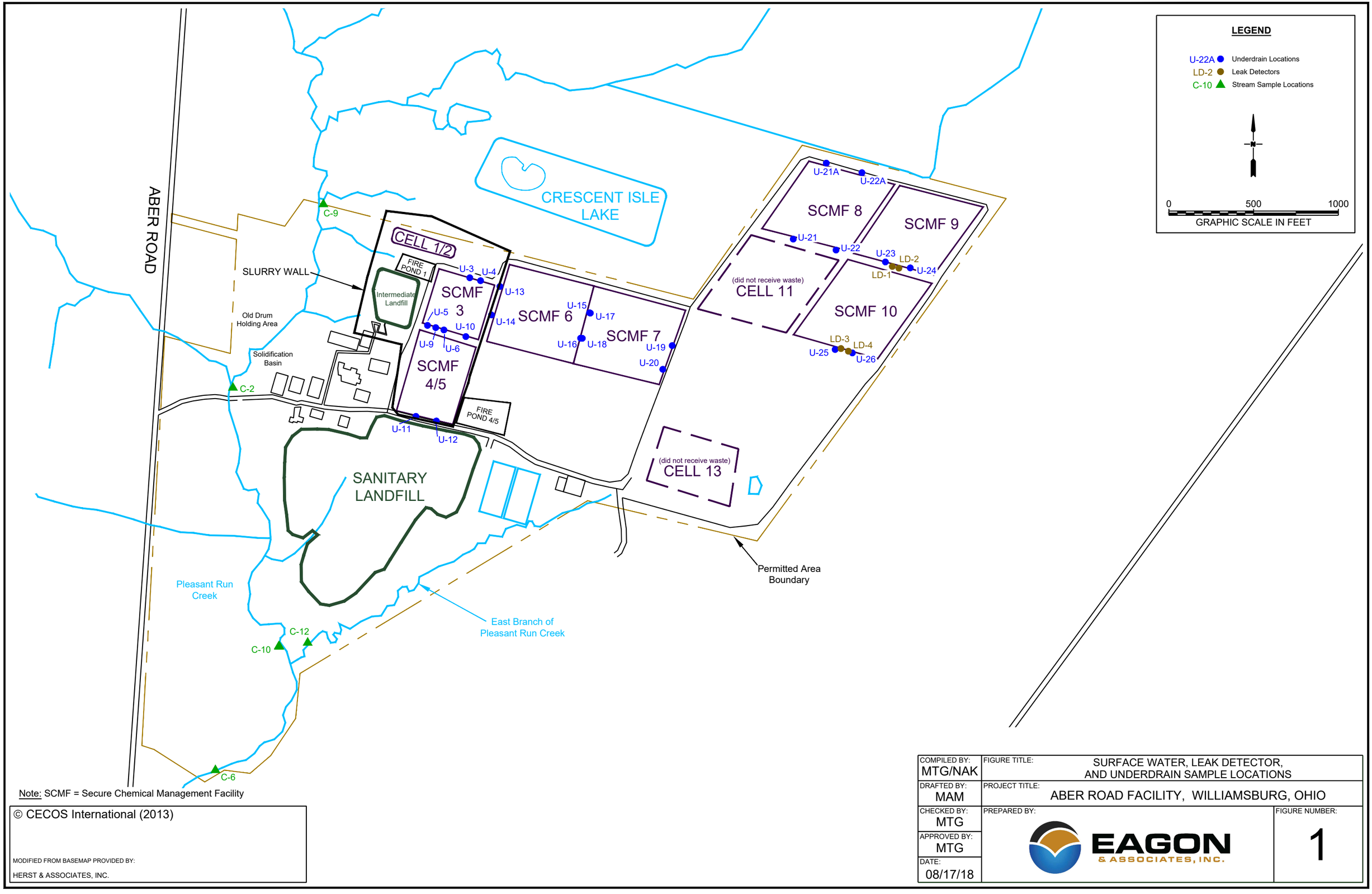
(U-23). Underdrains U-19 and U-23 are beneath SCMF-7 and SCMF-9, respectively, located in different parts of the Site (Figure 1). The reported low-level detections are considered suspect and are believed to be the result of laboratory error or field or laboratory cross-contamination. 1,2-dibromoethane is analyzed using Method 8011 and the laboratory has reported false-positive Method 8011 detections for Site samples in a few instances in the past. Nonetheless, the anomalous detections of 1,2-dibromoethane will be further investigated during the third quarter 2021 routine TSCA monitoring event scheduled for July 2021. The routine July event will be considered a verification event to confirm or deny the presence of this compound at U-19 and U-23.

VOC detections in the April 2021 and supplemental May 2021 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the April 2021 quarterly monitoring event and May 2021 supplemental event, including field information logs and chain-of-custody records, are presented herein in Appendices A and B, respectively.

FIGURES



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MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

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TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
APRIL 2021 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	23*
	1,2-Dichloroethene (Total)	22*
	Vinyl Chloride	1.5*
U-4[1]	1,1-Dichloroethane	7.0
	1,2-Dichloroethene (Total)	31
	Vinyl Chloride	2.2
Dup TSCA #3 (U-4)[1]	1,1-Dichloroethane	7.2
	1,2-Dichloroethene (Total)	32
	Vinyl Chloride	2.1
U-5[1]	1,1-Dichloroethane	6.4*
	1,2-Dichloroethene (Total)	18*
U-6[1]	1,1-Dichloroethane	18*
	1,2-Dichloroethene (Total)	13*
U-12[1]	1,2-Dichloroethene (Total)	10
	Vinyl Chloride	1.9
U-19	1,2-Dibromoethane	0.012
U-23	1,2-Dibromoethane	0.018

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

* Samples collected on May 12, 2021

2021 FIRST SEMIANNUAL STATISTICAL ANALYSIS REPORT

July 1, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

July 1, 2021

VIA EMAIL

Mr. Tim Hull
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

RE: Detection Monitoring Program
2021 First Semiannual Groundwater Quality and Statistical Analysis Results
CECOS International, Inc. - Aber Road Facility
Williamsburg, Ohio
EPA I.D. No. OHD 087 433 744

Dear Mr. Hull:

Transmitted herewith is the report: "Detection Monitoring Program, 2021 First Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility" (Eagon & Associates, Inc.; July 1, 2021). The report includes the results of the April 2021 sampling activities and statistical analysis of those results, where applicable. The 2021 first semiannual sampling event was conducted April 5 through 7, 2021. A resampling event was performed on May 12, 2021.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5. Groundwater monitoring activities for the facility's Detection Monitoring Program (DMP) are performed in accordance with the facility's approved Post-Closure Plan (March 2019) and OAC Rules 3745-54-90 through 54-100, where applicable.

There were three confirmed statistically significant increases identified during the event: dissolved barium at Bedrock-Till Interface wells MP-241R and MP-409, and Channel Sand well MP-406C. Initial statistically significant results for dissolved barium observed at wells MP-238R and MP-279 were not confirmed through resampling. There were no other statistically significant concentrations identified for any indicator constituent in any monitoring well during the event.

In accordance with OAC Rule 3745-54-98(G)(1), in a letter dated July 1, 2021 CECOS notified the Director of Ohio EPA of the statistically significant increases for barium at wells MP-241R, MP-406C, and MP-409. The letter also included a notification, pursuant to OAC Rue 3745-54-98(G)(6)(a), of CECOS's intent to submit a demonstration that a source other than the regulated unit caused the statistically significant changes. Barium is naturally occurring in groundwater at the facility and the changes in concentrations observed at the wells are consistent with natural variation and/or laboratory factors. In addition, barium concentrations at the wells remain low, within the range of other wells at the facility, and substantially below the drinking water MCL for barium. Nonetheless, in accordance with the requirements

of the Post-Closure Plan and OAC Rule 3745-54-98, CECOS will undertake the appropriate response actions during the required timelines to further evaluate the change observed for barium at MP-241R, MP-406C, and MP-409. Response actions will include site-specific Appendix IX sampling of selected wells specified in the Post-Closure Plan and appropriate updates to the Plan, if necessary, and are further detailed in Sections 1.0 and 5.0 of the attached report.

The 2021 first semiannual dissolved metals results for the Upper Sand and 880 Sand wells displayed similar characteristics to historical concentrations detected at each well or in each zone and notable observations are discussed in the report. There were no VOC detections in the Upper Sand or 880 Sand at or above the parameter-specific PQLs during the event and there was no indication that additional evaluation of those zones is appropriate at this time.

In accordance with US EPA requirements for the facility, the April 2021 event included sampling all DMP wells for Toxic Substances Control Act parameters total organic carbon and polychlorinated biphenyls (PCBs). Those results are presented in the laboratory analytical report included in Appendix A of the attached report. No PCBs were detected in any well during the event.

As required by the Post-Closure Plan, the DMP event report is being submitted within 90 days of the April 7 completion of the 2021 first semiannual sampling event; i.e., by July 6, 2021.

Please call me at (513) 724-6114 if you have any questions regarding this submittal.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachments: Detection Monitoring Program, 2021 First Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility

cc: Lisa Graczyk, US EPA Region 5
Todd Gmitro, US EPA Region 5
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.

File: B.3

DETECTION MONITORING PROGRAM
2021 FIRST SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS

CECOS INTERNATIONAL, INC.
ABER ROAD FACILITY
WILLIAMSBURG, OHIO

EPA ID # OHD-087-433-744

Prepared for:

CECOS INTERNATIONAL, INC.

Prepared by:

EAGON & ASSOCIATES, INC.
Worthington, Ohio

July 1, 2021

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100 West Old Wilson Bridge Road, Suite 115
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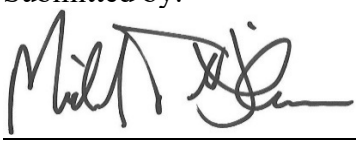
(614) 888-5760

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by:



Michael T. Gibson, CPG
Hydrogeologist
Eagon & Associates, Inc.

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2021 FIRST SEMIANNUAL
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CECOS INTERNATIONAL, INC. – ABER ROAD FACILITY

1.0 INTRODUCTION

This report presents the results of the 2021 first semiannual Detection Monitoring Program (DMP) groundwater sampling event performed at CECOS International Inc.'s (CECOS) Aber Road facility in Williamsburg, Ohio (Figure 1). The report has been prepared by Eagon & Associates, Inc. (Eagon) on behalf of the facility. The 2021 first semiannual DMP groundwater sampling event was completed April 5 through 7, 2021.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5 (Figure 1). Although the regulated units were closed under the Interim Status hazardous waste regulations, groundwater monitoring activities are performed in accordance with Ohio EPA's more comprehensive permitted status regulations; i.e., OAC Rules 3745-54-90 through 54-100. The 2021 first semiannual DMP sampling event was performed in accordance with the facility's Ohio EPA-approved Post-Closure Plan dated March 2019.

Included herein is a summary of the April 2021 field activities, analytical results, laboratory quality assurance and quality control (QA/QC) information, chain-of-custody records, field information forms, field-meter calibration records, and the statistical analysis results. The initial April 2021 concentrations for dissolved barium at Bedrock-Till Interface (BTI) monitoring wells MP-238R, MP-241R, MP-279, and MP-409, and Channel Sand well MP-406C were determined to be statistically significant. Verification samples collected in May 2021 did not confirm the initial statistically significant results for barium at wells MP-238R and MP-279; therefore, no further action relative to barium at MP-238R and MP-279 is necessary. The resample results for BTI wells MP-241R and MP-409, and Channel Sand MP-406C confirmed the statistically

significant increases observed during the initial sampling event in April. There were no other statistically significant concentrations of any constituent observed for any monitoring well during the event.

In accordance with OAC Rule 3745-54-98(G)(1), in a letter dated July 1, 2021, CECOS notified the Director of Ohio EPA of the July 1, 2021 determination of the confirmed statistically significant increases for dissolved barium at MW-241R, MP-406C, and MP-409. The letter included a notification, pursuant to OAC Rule 3745-54-98(G)(6)(a), of CECOS's intent to submit a demonstration that a source other than the regulated unit caused the statistically significant changes. Barium is naturally occurring in groundwater at the facility and the changes in concentrations observed at these wells are consistent with natural variation. These wells and the corresponding horizontal and vertical extent wells, as identified in the facility's Post-Closure Plan, will be sampled for all parameters listed on Appendix IX (Table 14 of the Plan) within 30 days of the July 1, 2021 determination of the statistically significant increases.

As the result of a delay by the commercial shipping courier, sample sets collected for fifteen wells and one field blank sample were received at the laboratory at temperatures that exceeded 10 degrees Celsius, which exceeded the default preservation requirements for Method 8260 (VOCs). The Ohio EPA was notified of the issue on April 13, 2021 and it was agreed that the Method 8260 (VOCs) samples would be analyzed without resampling. However, the laboratory did not move forward with analysis of the affected VOC samples before the holding time had expired. Therefore, CECOS determined that resampling was necessary and the affected wells were resampled on May 12, 2021. It is noted that Method 8011 samples submitted as part of the original sampling event in April were analyzed normally and also were analyzed in the May 2021 samples. The Method 8011 results from the April and May 2021 sampling events and the Method 8260 results for the May samples for the affected wells are included in this report.

1.1 Status of the Groundwater Monitoring Program

Four hydrostratigraphic zones are monitored as part of the DMP. Included in descending order are the Upper Sand, the 880 Sand, the Channel Sand, and the Bedrock-Till Interface. Only the BTI is present in all areas (Figures 2 through 5).

The DMP groundwater monitoring network consists of 45 monitoring wells, as follows:

- **Upper Sand**: one background and eight point-of-compliance monitoring wells;
- **880 Sand:** one background and 15 point-of-compliance wells;
- **Channel Sand:** one background and two point-of-compliance wells; and
- **BTI:** one background and 16 point-of-compliance wells.

In addition, site-wide water levels are measured semiannually in piezometers completed in each of the four monitoring zones. Figures 2 through 5 show the monitoring well and piezometer locations for each monitoring horizon, respectively. Tables 1A through 1D list the monitoring wells and piezometers completed in each monitoring zone.

The indicator constituents statistically evaluated for the Upper Sand and 880 Sand zones consist of the 62 U.S. EPA SW-846 Methods 8260 and 8011 volatile organic compounds (VOCs) listed on Table 11 of the facility's March 2019 Post-Closure Plan (PCP). The statistical indicator constituents for the Channel Sand and BTI zones include the same list of VOCs, plus the dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The Upper Sand and 880 Sand wells are sampled for the RCRA metals; however, those results are for informational purposes only and are not statistically evaluated. In accordance with the statistical analysis program, all point-of-compliance wells in each of the four monitoring horizons are evaluated for their respective indicator constituents during each routine semiannual event.

In addition to the post-closure groundwater monitoring activities, the DMP monitoring wells are sampled for the facility's Toxic Substances Control Act (TSCA) parameters and those

analytical results are also presented herein. The TSCA-specific parameters analyzed in addition to the DMP parameters are polychlorinated biphenyls (PCBs) and total organic carbon (TOC). Organic carbon is naturally occurring in groundwater at the Site and is regularly detected in most wells. No PCBs were detected in any sample collected during the April 2021 event.

2.0 EVENT SUMMARY

2.1 Field Activities

Groundwater sampling activities conducted during the 2021 first semiannual sampling event were performed by Eagon. Site-wide water levels were measured on April 5, 2021. Quality assurance/quality control (QA/QC) samples collected during the event included three duplicate samples, one field-blank sample, one matrix spike sample, and one matrix spike duplicate sample. The QA/QC samples were analyzed for all of the parameters included in the event. A trip blank was analyzed for VOCs.

As part of the routine event, the monitoring wells were purged using low-flow sampling protocols or were purged to dryness prior to sample collection following methods described in the Post-Closure Plan. The wells were sampled immediately following purging in low-flow wells and were sampled when adequate recharge had occurred in wells that were purged dry. Samples were collected from wells purged dry no later than 24 hours after purging was completed.

Field measurements of depth to water, pH, temperature, specific conductance, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured and recorded at each well. Depth to water, pH, temperature, and specific conductance measurements were used to monitor stabilization during purging for the purpose of determining when adequate purging had occurred in low-flow wells prior to sample collection. Field water-quality meters were calibrated and/or checked each day prior to sampling and the results of each calibration check are recorded on the field meter calibration forms, which are included in Appendices A and B.

Sample water for dissolved metals analysis was field filtered through inline 0.45-micron filters attached directly to the pump discharge tubing at each well.

A routine well inspection was completed at the time water levels were collected during the event. An obstruction below the top of the PVC well casing in 880 Sand Zone piezometer P-515A precluded the measurement of a water level at that location. P-515A is located in the vicinity of 880 Sand piezometers P-501A, P500B, P-517, and P-520, which were accessible for water-level measurement. Options to remedy the obstruction in MP-515A will be evaluated prior to completing the 2021 second semiannual sampling event. Separately, the well protector and concrete pad at well MP-272 was replaced by site personnel during the event. The protector and pad were observed to be in need of replacement during the previous sampling event. There were no other well integrity issues observed. The results of well integrity inspections performed at each monitoring well and piezometer and any corrective actions taken are recorded on inspection reports on file at the Site.

The field information forms and laboratory analytical data report for the event are included in Appendix A. Water levels, purge information, sample observations, and field parameters measured at each well at the time of purging and sampling are included on the field information forms. The corresponding information for the May 2021 resampling event is included in Appendix B.

2.2 Water Levels and Groundwater Flow

Groundwater flow conditions have been characterized for the 2021 first semiannual event using the April 5, 2021 water-level elevations measured in the monitoring wells and piezometers. All water levels were measured prior to purging any well and are summarized for the Upper Sand, 880 Sand, Channel Sand, and BTI in Tables 1A through 1D, respectively.

Figure 2 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Upper Sand at the time of the April 2021 sampling event. The Upper Sand is not present beneath the regulated units where it was excavated during construction,

nor is it present in other areas of the facility located outside of its natural areal extent shown on Figure 2. Water levels and flow orientations in the Upper Sand during the event were consistent with previous observations, with groundwater flow generally toward the south in the vicinity of the regulated units.

The groundwater flow velocity in the Upper Sand at the time of the April 2021 sampling event has been calculated using the following formula:

$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ = average linear flow velocity in feet per day (ft/d)
K = hydraulic conductivity (ft/d)
i = hydraulic gradient (dimensionless)
n = effective porosity (percent)

Assuming: K = 5.0 x 10^{-3} centimeters per second (cm/s), or 14 ft/d, based on the 1989 RCRA Facility Investigation (RFI); i = 1.7 x 10^{-2} in April 2021; and n = 25%; the calculated average linear groundwater flow velocity in the Upper Sand in the vicinity of the regulated units was approximately 1.0 ft/d during the event.

Figure 3 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the 880 Sand at the time of the April 2021 event. As with the Upper Sand discussed above, the 880 Sand is not present where it was excavated beneath the regulated units and has limited natural areal extent outside of the units. Water levels and flow orientations in the 880 Sand during the event were consistent with previous observations. The groundwater flow direction in the vicinity of the regulated units was generally toward the south, with slight southeastward and southwestward variations in some areas (Figure 3).

Assuming: K = 1.0 x 10^{-2} cm/s (28.3 ft/d) (RFI); i = 1.5 x 10^{-2} in April 2021; and n = 25%; the calculated average linear groundwater flow velocity in the 880 Sand in the vicinity of the regulated units was approximately 1.7 ft/d during the event.

Figure 4 shows the contoured water-level elevations and groundwater flow conditions within the Channel Sand at the time of the sampling event. Water levels and flow orientations were consistent with previous observations. The groundwater flow direction in the Channel Sand follows the discrete nature of the unit and showed an eastward component of flow in the northwestern half of the facility and a south-southeastward component of flow in the vicinity of SCMF 10 during the event.

Assuming: K = 1.0 x 10^{-1} cm/s (283 ft/d) (RFI); i = 3.3 x 10^{-4} in April 2021; and n = 25%; the calculated average linear groundwater flow velocity in the Channel Sand in the vicinity of the regulated units was approximately 0.4 ft/d during the event.

Figure 5 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Bedrock-Till Interface (BTI). April 2021 water levels and flow orientations were generally consistent with previous observations. The groundwater flow direction in the BTI varies across the site as shown on Figure 5 and is characterized as southwesterly in the western part of the site, southerly in the central area, and southeasterly in the eastern part of the site.

Assuming: K = 5.0 x 10^{-5} cm/s (0.14 ft/d) (RFI); i = 7.1 x 10^{-3} in April 2021; and n = 20%; the calculated average linear groundwater flow velocity in the BTI in the vicinity of the regulated units was approximately 4.9 x 10^{-3} ft/d during the event.

The general flow directions and velocities discussed above for each of the four monitoring zones are consistent with previous observations. The adequacy of well placement in the groundwater monitoring network has been evaluated using the April 2021 groundwater flow conditions and the requirements of OAC Rule 3745-54-97(A). Based upon that review, the groundwater monitoring network for the Detection Monitoring Program at the Aber Road facility

continues to consist of a sufficient number of appropriately placed monitoring wells to detect statistically significant concentrations of hazardous constituents downgradient of the regulated units.

2.3 Sample Analyses and Quality Assurance

The analytical results for all inorganic parameters at each well in the Upper Sand, 880 Sand, Channel Sand, and Bedrock-Till Interface are summarized on Tables 2, 3, 4, and 5, respectively. Table 6 summarizes the field-bias (i.e., field blank and trip blank) and laboratory method blank results from the event. The analytical methods, PQLs (identified as "RL" in the laboratory reports), and method detection limits (MDLs) are shown on the laboratory analytical report included in Appendix A. All laboratory analyses of groundwater samples were performed by Eurofins TestAmerica Laboratories (ETA) of Amherst, New York. All field analyses were performed by Eagon personnel. The field and laboratory analytical results for April and May 2021 will be entered into the facility's 2021 annual groundwater reporting electronic database that will be submitted to Ohio EPA by March 1, 2022.

As mentioned previously, the sample sets for fifteen wells were delayed in shipping and were received at the laboratory above 10 degrees Celsius. Upon concurrence from Ohio EPA, these sample sets were analyzed without resampling with the exception of the 8260 analyses. The laboratory did not analyze the method 8260 VOC samples sets within holding time. Therefore, the 8260 VOCs for these wells were resampled in May 2021. The 8260 results from both the May 2021 resampling event are presented in Appendix B of this report. No other QA/QC issues that required corrective action were observed during the event.

Duplicate samples were collected from monitoring wells MP-228AR, MP-234AR, and MP-280A during the April 2021 event. The duplicate results are in close agreement with their associated monitoring well sample results. Relative percent differences (RPD) for constituents detected in all of the original and duplicate samples are shown next to their respective original well sample results on Table 3 and were below an RPD of 10 for all analytes.

A field blank sample (Field Blank – DMP) also was collected for QA/QC purposes and was prepared using laboratory supplied, reagent-grade deionized water. The field blank was analyzed for all parameters included in the monitoring event. There were no quantified detections of any constituent analyzed in the field blank. A trip blank prepared by the laboratory was analyzed for VOCs and there were no detections.

Laboratory QA/QC was evaluated internally by laboratory personnel and a summary narrative of that evaluation is included in Appendix A. No QA/QC issues noted by the laboratory required corrective action, with the exception of the previously discussed method 8260 analyses at fifteen wells. All results for the event are considered representative.

3.0 STATISTICAL ANALYSIS

Statistical analysis of the April 2021 semiannual DMP monitoring results was completed in accordance with the statistical program detailed in Section 11 (Groundwater Statistical Analysis Plan) of the Post-Closure Plan (March 2019). The April 2021 results for the eight dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were statistically evaluated for the two point-of-compliance (POC) Channel Sand monitoring wells (MP-281C and MP-406C) and the 16 POC BTI monitoring wells (MP-233R, MP-234R, MP-235R, MP-237, MP-238R, MP-241R, MP-244R, MP-250, MP-274, MP-279, MP-280 and MP-281, MP-404, MP-407, MP-408, and MP-409). In addition, statistical analysis of the results for the 62 indicator VOCs has been performed for all downgradient monitoring wells in all four monitoring horizons.

Statistical analysis was performed via the comparison of the April 2021 results to intrawell prediction limits calculated for the dissolved indicator metals using the *Sanitas*™ statistical software package, as presented in the March 2019 Post-Closure Plan. The VOC results were compared to their respective PQLs.

3.1 Background Data

The intrawell statistical methods used to evaluate the dissolved metals results at the Aber Road facility involve comparisons between monitoring data collected during a background period to future semiannual sampling results from the same well to determine if the results are statistically significant. VOC results are compared to their respective PQLs. Current summary background statistics computed for each downgradient well, for each RCRA metal, are presented in Appendix C.

3.2 Statistical Analysis of April 2021 Dissolved Metals Results

The results of the statistical analyses for the dissolved metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were completed for the Channel Sand and BTI zones and are presented in Appendix C. The initial, April 2021 results for dissolved barium at BTI wells MP-238R (0.050 mg/L), MP-241R (0.058 mg/L), MP-279 (1.2 mg/L), and MP-409 (0.13 mg/L), and channel sand well MP-406C (0.16 mg/L) exceeded their respective intrawell statistical limits. These wells were resampled for dissolved barium on May 12, 2021. The resample results for MP-238R (0.045 mg/L) and MP-279 (1.1 mg/L) did not confirm the April exceedances; therefore, there were no confirmed statistically significant metals results for these wells. The resample results for MP-241R (0.056 mg/L), MP-406C (0.16 mg/L), and MP-409 (0.13 mg/L) were also statistical exceedances and confirmed the April exceedances. Laboratory variability is the suspected cause of the confirmed exceedances for barium and will be investigated further during the required 90-day evaluation period following this determination of a statistically significant increase at the three affected wells. No other statistically significant results were identified during the event.

As with past events, arsenic and barium were detected at most wells. Cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above their PQLs at any Channel Sand or BTI monitoring well during the event. Arsenic and barium are naturally occurring in all saturated intervals monitored at the site. Barium concentrations vary seasonally in many wells and were generally higher in the Channel Sand and BTI wells in April 2021 compared to the previous

event completed in October 2020, which supports the preliminary conclusion that the statistically significant changes observed for three wells during the April 2021 event were the result of natural variation, not a release from the regulated units.

3.3 Statistical Analysis of VOCs

In accordance with the statistical analysis plan, a statistically significant result for any one of the 62 VOCs on the DMP indicator parameter list is defined as a confirmed detection at or above the constituent's PQL at the point-of-compliance. Thus, if a VOC is detected at or above its PQL in a sample collected during a routine sampling event, and a resample and reanalysis is conducted and the VOC also is detected at or above its PQL in the resample, then the VOC result reported during the routine event is considered statistically significant.

Summaries of comparisons of the VOC results to their respective PQLs at the downgradient monitoring wells are presented in Tables 2 through 5. An "ND" result on the tables indicates that all 62 VOCs analyzed were not detected at or above their respective PQLs for that well. There were no VOCs detected at or above their respective PQLs at any monitoring well during the April 2021 event or May event for the fifteen wells resampled due to holding time issues (Appendices A and B). Therefore, no statistical exceedances of VOCs occurred during the event.

4.0 EVALUATION OF DISSOLVED METALS RESULTS FROM THE UPPER SAND AND 880 SAND

Semiannual dissolved metals results from the Upper Sand and 880 Sand monitoring networks are not statistically evaluated; however, those results are reviewed qualitatively for reference purposes. For the April 2021 event, time-series plots were generated for the eight dissolved metals routinely sampled in the Upper Sand and 880 Sand zones and are presented in Appendix D (Upper Sand) and Appendix E (880 Sand). Included are plots for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Dissolved arsenic and chromium results are available for wells included in the monitoring program since as far back as 1997, whereas

dissolved barium, cadmium, lead, mercury, selenium, and silver have been routinely analyzed since October 2012.

Barium at Upper Sand monitoring well MP-402A (0.048 mg/L) remained near its upper historical range in April 2021. However, recent barium concentrations in the well continue to be consistent with those observed at other Upper Sand wells, including nearby wells MP-244ARR (0.068 mg/L) and MP-401A (0.049 mg/L). Changes in barium concentrations since 2017 (Appendix D) display seasonality common to other Upper Sand wells when compared to relatively static early results following the well's installation in 2012. Higher concentrations are often observed at the well during the fall events compared to spring. In addition, the variability in concentrations at MP-402A since 2017, and the range of concentrations observed, are typical for the Upper Sand and suggest that barium concentrations in the well continue to normalize to the range of natural variability observed in both the Upper Sand and 880 Sand at the Site (Appendices D and E).

Arsenic concentrations at 880 Sand wells MP-230A (0.0096 mg/L) and MP-280A (0.020 mg/L) were reduced in April 2021 compared to upper-range concentrations of 0.011 and 0.025 mg/L, respectively, observed at the wells in October 2020. The April 2021 results support previous observations that concentrations and variability of arsenic at these wells are within the normal range of concentrations observed at other Site wells in the 880 Sand.

As shown on the time-series plots, the April 2021 metals results were generally within the range of previously observed concentrations in both the Upper Sand and 880 Sand. None of the results were substantially divergent from historical results. Arsenic is typically detected in most wells and barium was detected in all Upper Sand and 880 Sand wells during the event. A low-level detection of chromium (0.008 mg/L) was reported for 880 Sand well MP-235BR, where a similar detection has occurred in the past, and was slightly below that historical result. Chromium is sporadically detected in several monitoring wells installed in both the Upper Sand and 880 Sand zones, including within historical ranges at 880 Sand well MP-211BR during the April 2021 event.

No detections of any other metals at or above their respective PQLs in the 880 Sand or Upper Sand monitoring wells were identified during the event. Based on the review of the April 2021 sampling results, no additional evaluation of the Upper Sand and 880 Sand monitoring zones is warranted at this time.

5.0 SUMMARY

Analysis of the 2021 first semiannual DMP groundwater quality sampling results collected in April 2021 identified initial statistically significant results for dissolved barium at BTI wells MP-238R, MP-241R, MP-279, and MP-409 and channel sand well MP-406C. Resamples collected in May 2021 confirmed the original results at wells MP-241R, MP-406C, and MP-409. In accordance with OAC Rule 3745-54-98(G)(1), the Director of Ohio EPA was notified in a letter dated July 1, 2021 of the confirmed exceedances determined herein. For the event, no other confirmed statistically significant concentrations for the indicator constituents were present at any well downgradient of the regulated units at the Aber Road facility.

April 2021 sampling results for TOC and PCBs for all 45 DMP monitoring wells are presented herein in Appendix A. TOC and PCBs are analyzed during routine DMP sampling events in accordance with the facility's TSCA monitoring requirements. No PCBs were detected in any DMP monitoring well during the event.

Due to the confirmed barium exceedances at wells MP-241R, MP406C, and MP-409, these wells and their associated extent wells identified in the PCP will be sampled for Appendix IX parameters within 30 days of the determination that statistically significant increases occurred; i.e., by July 31, 2021.

The next routine semiannual DMP groundwater sampling event is tentatively scheduled for October 2021.

TABLES

TABLE 2.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
UPPER SAND ZONE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-206AR 4/7/2021	MP-206AR 5/12/2021	MP-231AR 4/7/2021	MP-231AR 5/12/2021	MP-235CR 4/7/2021	MP-235CR 5/12/2021	MP-244ARR 4/6/2021	MP-401A 4/5/2021	MP-402A 4/5/2021	MP-403A 4/6/2021	MP-404A 4/6/2021	MP-405A 4/7/2021	MP-405A 5/12/2021
Arsenic, Dissolved	mg/L	<0.001	--	**0.0020**	--	<0.001	--	**0.0073**	<0.001	**0.0035**	<0.001	<0.001	<0.001	--
Barium, Dissolved	mg/L	**0.0091**	--	**0.0051**	--	**0.011**	--	**0.057**	**0.041**	**0.048**	**0.0100**	**0.045**	**0.014**	--
Cadmium, Dissolved	mg/L	<0.001	--	<0.001	--	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Chromium, Dissolved	mg/L	<0.005	--	<0.005	--	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	mg/L	<0.005	--	<0.005	--	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Mercury, Dissolved	mg/L	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--
Selenium, Dissolved	mg/L	<0.015	--	<0.015	--	<0.015	--	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	--
Silver, Dissolved	mg/L	<0.003	--	<0.003	--	<0.003	--	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	--
VOCs	ug/L	ND*	ND	ND*	ND	ND*	ND	ND	ND	ND	ND	ND	ND*	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-210AR 4/6/2021	MP-211BR 4/6/2021	MP-213A 4/6/2021	MP-213A 4/6/2021	MP-214BR 4/6/2021	MP-228AR 4/6/2021	Dup-DMP#1 4/6/2021	RPD
Arsenic, Dissolved	mg/L	**0.0022**	<0.001	<0.001	--	**0.0024**	**0.0034**	**0.0036**	5.7%
Barium, Dissolved	mg/L	**0.057**	**0.039**	**0.035**	--	**0.0090**	**0.029**	**0.029**	0.0%
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	NC
Chromium, Dissolved	mg/L	<0.005	**0.011**	<0.005	--	<0.005	<0.005	<0.005	NC
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	NC
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	NC
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	--	<0.015	<0.015	<0.015	NC
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	--	<0.003	<0.003	<0.003	NC
VOCs	ug/L	ND	ND	ND*	ND	ND	ND	ND	NC

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-230A 4/5/2021	MP-232A 4/5/2021	MP-233AR 4/6/2021	MP-234AR 4/6/2021	Dup-DMP#2 4/6/2021	RPD	MP-235BR 4/7/2021	MP-235BR 5/12/2021	MP-250A 4/7/2021
Arsenic, Dissolved	mg/L	**0.0096**	**0.0061**	**0.0051**	**0.0048**	**0.0049**	2.1%	**0.0020**	--	**0.0051**
Barium, Dissolved	mg/L	**0.034**	**0.027**	**0.022**	**0.0091**	**0.0093**	2.2%	**0.013**	--	**0.0350**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	NC	<0.001	--	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	NC	**0.008**	--	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	--	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NC	<0.0002	--	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	NC	<0.015	--	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	NC	<0.003	--	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	NC	ND*	ND	ND*

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-250A 5/12/2021	MP-251A 4/6/2021	MP-274A 4/6/2021	MP-277A 4/7/2021	MP-277A 5/12/2021	MP-280A 4/6/2021	Dup-DMP#3 4/6/2021	RPD	MP-401B 4/5/2021
Arsenic, Dissolved	mg/L	--	**0.0025**	**0.0460**	**0.0076**	--	**0.0200**	**0.0200**	0.0%	**0.0053**
Barium, Dissolved	mg/L	--	**0.100**	**0.028**	**0.029**	--	**0.027**	**0.027**	0.0%	**0.039**
Cadmium, Dissolved	mg/L	--	<0.001	<0.001	<0.001	--	<0.001	<0.001	NC	<0.001
Chromium, Dissolved	mg/L	--	<0.005	<0.005	<0.005	--	<0.005	<0.005	NC	<0.005
Lead, Dissolved	mg/L	--	<0.005	<0.005	<0.005	--	<0.005	<0.005	NC	<0.005
Mercury, Dissolved	mg/L	--	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	NC	<0.0002
Selenium, Dissolved	mg/L	--	<0.015	<0.015	<0.015	--	<0.015	<0.015	NC	<0.015
Silver, Dissolved	mg/L	--	<0.003	<0.003	<0.003	--	<0.003	<0.003	NC	<0.003
VOCs	ug/L	ND	ND	ND	ND*	ND	ND	ND	NC	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 4.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
CHANNEL SAND ZONE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-281C 4/6/2021	MP-286C 4/6/2021	MP-406C 4/7/2021	MP-406C 5/12/2021
Arsenic, Dissolved	mg/L	**0.0045**	**0.0033**	**0.0035**	--
Barium, Dissolved	mg/L	**0.053**	**0.140**	**0.160**	**0.160**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	--
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	--
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	--
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	--
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	--
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	--
VOCs	ug/L	ND	ND	ND*	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-228R 4/6/2021	MP-233R 4/6/2021	MP-234R 4/6/2021	MP-235R 4/7/2021	MP-235R 5/12/2021	MP-237 4/6/2021	MP-237 5/12/2021	MP-238R 4/7/2021	MP-238R 5/12/2021
Arsenic, Dissolved	mg/L	**0.0028**	**0.0021**	<0.001	<0.001	--	<0.001	--	<0.001	--
Barium, Dissolved	mg/L	**0.078**	**0.450**	**0.048**	**0.047**	**--**	**0.032**	**--**	**0.050**	**0.045**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	--	<0.001	--	<0.001	--
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	--	<0.005	--	<0.005	--
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	--	<0.005	--	<0.005	--
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	--	<0.0002	--
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	--	<0.015	--	<0.015	--
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	--	<0.003	--	<0.003	--
VOCs	ug/L	ND	ND	ND	ND*	ND	ND*	ND	ND*	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-241R 4/6/2021	MP-241R 5/12/2021	MP-244R 4/6/2021	MP-250 4/7/2021	MP-250 5/12/2021	MP-274 4/6/2021	MP-279 4/7/2021	MP-279 5/12/2021	MP-280 4/6/2021
Arsenic, Dissolved	mg/L	<0.001	--	<0.001	**0.0011**	--	<0.001	<0.001	--	**0.0250**
Barium, Dissolved	mg/L	**0.058**	**0.056**	**0.021**	**0.054**	--	**0.420**	**1.200**	**1.100**	**0.320**
Cadmium, Dissolved	mg/L	<0.001	--	<0.001	<0.001	--	<0.001	<0.001	--	<0.001
Chromium, Dissolved	mg/L	<0.005	--	<0.005	<0.005	--	<0.005	<0.005	--	<0.005
Lead, Dissolved	mg/L	<0.005	--	<0.005	<0.005	--	<0.005	<0.005	--	<0.005
Mercury, Dissolved	mg/L	<0.0002	--	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<0.0002
Selenium, Dissolved	mg/L	<0.015	--	<0.015	<0.015	--	<0.015	<0.015	--	<0.015
Silver, Dissolved	mg/L	<0.003	--	<0.003	<0.003	--	<0.003	<0.003	--	<0.003
VOCs	ug/L	ND	--	ND	ND*	ND	ND	ND*	ND	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-281 4/6/2021	MP-281 5/12/2021	MP-404 4/6/2021	MP-407 4/5/2021	MP-408 4/6/2021	MP-409 4/6/2021	MP-409 5/12/2021
Arsenic, Dissolved	mg/L	<0.001	--	**0.0015**	<0.001	**0.0760**	**0.0018**	--
Barium, Dissolved	mg/L	**0.290**	--	**0.410**	**0.710**	**0.720**	**0.13**	**0.13**
Cadmium, Dissolved	mg/L	<0.001	--	<0.001	<0.001	<0.001	<0.001	--
Chromium, Dissolved	mg/L	<0.005	--	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	mg/L	<0.005	--	<0.005	<0.005	<0.005	<0.005	--
Mercury, Dissolved	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	--
Selenium, Dissolved	mg/L	<0.015	--	<0.015	<0.015	<0.015	<0.015	--
Silver, Dissolved	mg/L	<0.003	--	<0.003	<0.003	<0.003	<0.003	--
VOCs	ug/L	ND*	ND	ND	ND	ND	ND*	ND

ND - no detections at or above PQL.
NC - not calculable
* - 8011 VOCs Only

TABLE 6.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
QA/QC SAMPLES
APRIL 2021
CECOS - ABER ROAD FACILITY

Constituent	Field Blank DMP 4/7/2021	Method Blank	Trip Blank
Arsenic, Dissolved	<0.001	<0.001 (3)	--
Barium, Dissolved	<0.002	<0.002 (3)	--
Cadmium, Dissolved	<0.001	<0.001 (3)	--
Chromium, Dissolved	<0.005	<0.005 (3)	--
Lead, Dissolved	<0.005	<0.005 (3)	--
Mercury, Dissolved	<0.0002	<0.0002 (3)	--
Selenium, Dissolved	<0.015	<0.015 (3)	--
Silver, Dissolved	<0.003	<0.003 (5)	--
VOCs	ND	ND (8)	ND

ND - no detections at or above PQL.

-- Not Analyzed

( ) Number of Method Blank batches run by laboratory for parameter.

See Laboratory Report QA/QC section for separate analyses.

THIRD QUARTER 2021 MONITORING REPORT

August 18, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

August 18, 2021

VIA EMAIL
Ms. Lisa Graczyk
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
July 2021 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Ms. Graczyk:

Please find the attached Quarterly Monitoring Report for the July 2021 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the July 2021 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains. Please note that the July 2021 sampling results for samples from underdrains U-19 and U-23 were nondetect for 1,2-dibromoethane (EDB) and, therefore, did not confirm anomalous, low-level detections of EDB in April 2021. Based on our evaluation of the April 2021 detections and July 2021 results, it is concluded that the anomalous April 2021 detections of EDB were the result of laboratory error or field or laboratory cross-contamination.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

JULY 2021 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

August 2021

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
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(614) 888-5760

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1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the July 2021 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The July 2021 quarterly monitoring sampling event was performed July 12, 13, and 14, 2021. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). As discussed above, samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the July 2021 event and were sampled for VOCs, PCBs, and TOC.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1).

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the July 2021 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF

and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the July 2021 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

There were no quantified detections of VOCs in the surface water samples. In addition, there were no quantified detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the July 2021 event.

During the routine second quarter TSCA sampling event conducted in April 2021, anomalous, low-level detections of 1,2-dibromoethane (syn. ethylene dibromide or EDB) were reported for underdrains U-19 (0.012 ug/L) and U-23 (0.018 ug/L). These results were considered suspect. The July 2021 sampling results for samples from underdrains U-19 and U-23 were nondetect for EDB and, therefore, did not confirm the low-level detections of EDB in April 2021. Based on our evaluation of the April 2021 detections and the July 2021 results, it is concluded that the anomalous April 2021 detections of EDB were the result of laboratory error or field or laboratory cross-contamination.

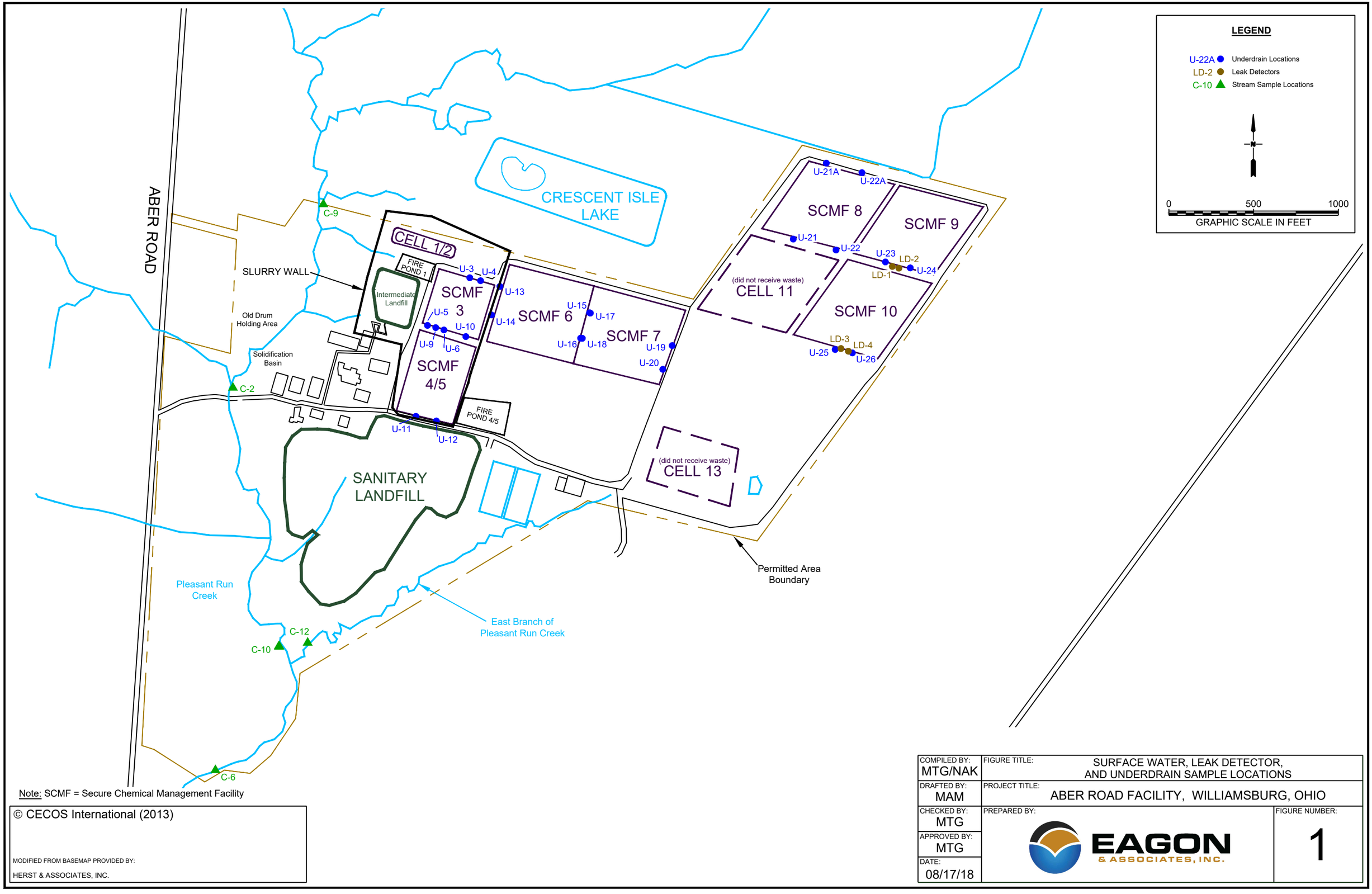
VOC detections in the July 2021 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the

slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the July 2021 quarterly monitoring event including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



© CECOS International (2013)

MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

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TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
JULY 2021 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	21
	1,2-Dichloroethene (Total)	18
	Vinyl Chloride	1.1
U-4[1]	1,1-Dichloroethane	6.1
	1,2-Dichloroethene (Total)	25
	Vinyl Chloride	3.9
Dup TSCA #3 (U-4)[1]	1,1-Dichloroethane	6.1
	1,2-Dichloroethene (Total)	25
	Vinyl Chloride	3.7
U-5[1]	1,1-Dichloroethane	7.7
	1,2-Dichloroethene (Total)	17
U-6[1]	1,1-Dichloroethane	18
	1,2-Dichloroethene (Total)	13
U-12[1]	1,2-Dichloroethene (Total)	9.5
	Vinyl Chloride	2.0

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

FOURTH QUARTER 2021 MONITORING REPORT

November 18, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

November 18, 2021

VIA EMAIL
Ms. Lisa Graczyk
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
October 2021 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Ms. Graczyk:

Please find the attached Quarterly Monitoring Report for the October 2021 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the October 2021 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

OCTOBER 2021 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

November 2021

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APPENDICES

1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the October 2021 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The October 2021 quarterly monitoring sampling event was performed October 4, 5, and 6, 2021. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). As discussed above, samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the October 2021 event and were sampled for VOCs, PCBs, and TOC.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1).

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the October 2021 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF

and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the October 2021 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

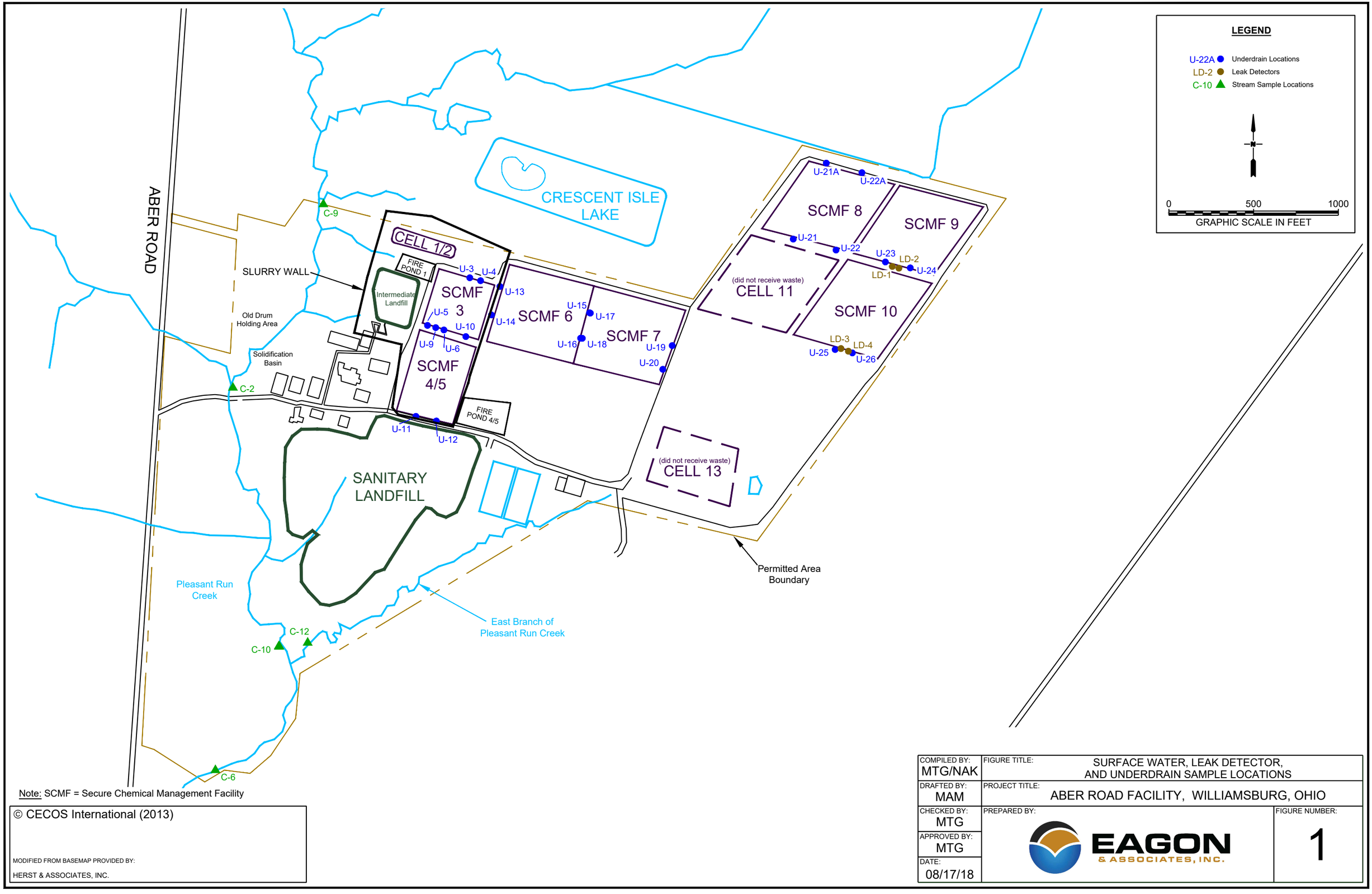
There were no quantified detections of VOCs in the surface water samples. In addition, there were no quantified detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the October 2021 event.

VOC detections in the October 2021 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the October 2021 quarterly monitoring event including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



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COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

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TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
OCTOBER 2021 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	18
	1,2-Dichloroethene (Total)	19
	Vinyl Chloride	1.2
Dup TSCA #3 (U-3)[1]	1,1-Dichloroethane	15
	1,2-Dichloroethene (Total)	19
	Vinyl Chloride	1.2
U-4[1]	1,1-Dichloroethane	5.1
	1,2-Dichloroethene (Total)	18
	Vinyl Chloride	3.6
U-5[1]	1,1-Dichloroethane	7.6
	1,2-Dichloroethene (Total)	18
U-6[1]	1,1-Dichloroethane	23
	1,2-Dichloroethene (Total)	13
U-12[1]	1,2-Dichloroethene (Total)	12
	Vinyl Chloride	1.5

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

2021 SECOND SEMIANNUAL STATISTICAL ANALYSIS REPORT

December 20, 2021

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

December 20, 2021

VIA EMAIL

Mr. Tim Hull
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

RE: Detection Monitoring Program
2021 Second Semiannual Groundwater Quality and Statistical Analysis Results
CECOS International, Inc. - Aber Road Facility
Williamsburg, Ohio
EPA I.D. No. OHD 087 433 744

Dear Mr. Hull:

Transmitted herewith is the report: "Detection Monitoring Program, 2021 Second Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility" (Eagon & Associates, Inc.; December 20, 2021). The report includes the results of the October 2021 sampling activities, December 2021 resampling activities, and statistical analysis of those results, where applicable. The 2021 second semiannual sampling event was conducted October 4-6, 2021. A resampling event for dissolved barium at well MP-274 was conducted on December 6, 2021.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5. Groundwater monitoring activities for the facility's Detection Monitoring Program (DMP) are performed in accordance with the facility's approved Post-Closure Plan (PCP) dated March 2019, the proposed September 2021 version of the PCP and OAC Rules 3745-54-90 through 54-100, where applicable. CECOS has been notified that approval of the September 2021 PCP is forthcoming; therefore, updates to the statistical analysis program presented in the updated PCP have been used to evaluate the October 2021 groundwater quality results.

There was one initial statistically significant result identified during the event: dissolved barium at BTI well MP-274. The well was resampled and the resampling results did not confirm the initial results. Therefore, there were no confirmed statistically significant concentrations identified for any indicator constituent in any monitoring well during the event. The 2021 second semiannual dissolved metals results for the Upper Sand and 880 Sand wells displayed similar characteristics to historical concentrations detected at each well or in each zone and notable observations are discussed in the report. There were no VOC detections in the Upper Sand or 880 Sand at or above the parameter-

specific PQLs during the event and there was no indication that additional evaluation of those zones is appropriate at this time.

In accordance with US EPA requirements for the facility, the October 2021 event included sampling all DMP wells for Toxic Substances Control Act parameters total organic carbon and polychlorinated biphenyls (PCBs). Those results are presented in the laboratory analytical report included in Appendix A of the attached report. No PCBs were detected in any well during the event.

As required by the Post-Closure Plan, the DMP event report is being submitted within 90 days of the October 6 completion of the 2021 second semiannual sampling event; i.e., by January 4, 2022.

Please call me at (513) 724-6114 if you have any questions regarding this submittal.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachments: *Detection Monitoring Program, 2021 Second Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility*

cc: Jae Lee, US EPA Region 5
Todd Gmitro, US EPA Region 5
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.

File: B.3

DETECTION MONITORING PROGRAM
2021 SECOND SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS

CECOS INTERNATIONAL, INC.
ABER ROAD FACILITY
WILLIAMSBURG, OHIO

EPA ID # OHD-087-433-744

Prepared for:

CECOS INTERNATIONAL, INC.

Prepared by:

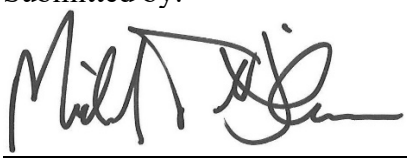
EAGON & ASSOCIATES, INC.
Worthington, Ohio

December 20, 2021

EAGON & ASSOCIATES, INC.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by:



Michael T. Gibson, CPG
Hydrogeologist
Eagon & Associates, Inc.

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2021 SECOND SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS
CECOS INTERNATIONAL, INC. – ABER ROAD FACILITY

1.0 INTRODUCTION

This report presents the results of the 2021 second semiannual Detection Monitoring Program (DMP) groundwater sampling event performed at CECOS International Inc.'s (CECOS) Aber Road facility in Williamsburg, Ohio (Figure 1). The report has been prepared by Eagon & Associates, Inc. (Eagon) on behalf of the facility. The 2021 second semiannual sampling event was completed October 4 through 6, 2021.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5 (Figure 1). Although the regulated units were closed under the Interim Status hazardous waste regulations, groundwater monitoring activities are performed in accordance with Ohio EPA's more comprehensive permitted status regulations; i.e., OAC Rules 3745-54-90 through 54-100. The 2021 second semiannual DMP sampling event was performed in accordance with the facility's Ohio EPA Post-Closure Plans dated March 2019 and September 2021, where applicable. It is noted that in early December 2021 CECOS was notified that approval of the September 2021 was forthcoming; therefore, updates to the statistical analysis plan presented in the September 2021 Post-Closure Plan update have been applied herein. Other components of the 2021 second semiannual sampling event followed the March 2019 version of the Post-Closure Plan in effect at the time of the sampling event. For example, any changes to laboratory analytical methods proposed in the September 2021 version of the Post-Closure Plan will be implemented beginning with 2022 monitoring activities.

Biennial groundwater sampling was also performed for major cations and anions in October 2021. This event is performed at Clermont County's request and the results are presented

herein for reference only. Biennial sampling for the major ions is not a component of the regulatory framework for the facility's RCRA post-closure program.

Included herein is a summary of the October 2021 field activities, analytical results, laboratory quality assurance and quality control (QA/QC) information, chain-of-custody records, field information forms, field-meter calibration records, and the statistical analysis results.

The initial October 2021 concentration for dissolved barium at Bedrock-Till Interface (BTI) monitoring well MP-274 was determined to be statistically significant. A resampling event for dissolved barium at MP-274 was conducted on December 6, 2021 and the result from that event did not confirm the October 2021 result. Therefore, no confirmed statistically significant results were identified for any monitoring well during the event.

1.1 Status of the Groundwater Monitoring Program

Four hydrostratigraphic zones are monitored as part of the DMP. Included in descending order are the Upper Sand, the 880 Sand, the Channel Sand, and the Bedrock-Till Interface. Only the BTI is present in all areas (Figures 2 through 5).

The DMP groundwater monitoring network consists of 45 monitoring wells, as follows:

- **Upper Sand**: one background and eight point-of-compliance monitoring wells;
- **880 Sand:** one background and 15 point-of-compliance wells;
- **Channel Sand:** one background and two point-of-compliance wells; and
- **BTI:** one background and 16 point-of-compliance wells.

In addition, site-wide water levels are measured semiannually in piezometers completed in each of the four monitoring zones. Figures 2 through 5 show the monitoring well and piezometer locations for each monitoring horizon, respectively. Tables 1A through 1D list the monitoring wells and piezometers completed in each monitoring zone.

The indicator constituents statistically evaluated for the Upper Sand and 880 Sand zones consist of the 62 U.S. EPA SW-846 Methods 8260 and 8011 volatile organic compounds (VOCs) listed on Table 11 of the facility's Post-Closure Plan. The statistical indicator constituents for the Channel Sand and BTI zones include the same list of VOCs, plus the dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The Upper Sand and 880 Sand wells are sampled for the RCRA metals; however, those results are for informational purposes only and are not statistically evaluated. In accordance with the statistical analysis program, all point-of-compliance wells in each of the four monitoring horizons are evaluated for their respective indicator constituents during each routine semiannual event.

In addition to the post-closure groundwater monitoring activities, the DMP monitoring wells are sampled for the facility's Toxic Substances Control Act (TSCA) parameters and those analytical results are also presented herein. The TSCA-specific parameters analyzed in addition to the DMP parameters are polychlorinated biphenyls (PCBs) and total organic carbon (TOC). Organic carbon is naturally occurring in groundwater at the Site and is regularly detected in most wells. No PCBs were detected in any sample collected during the October 2021 event.

2.0 EVENT SUMMARY

2.1 Field Activities

Groundwater sampling activities conducted during the 2021 second semiannual sampling event were performed by Eagon. Site-wide water levels were measured on October 4, 2021. Quality assurance/quality control (QA/QC) samples collected during the event included three duplicate samples, one field-blank sample, one matrix spike sample, and one matrix spike duplicate sample. The QA/QC samples were analyzed for all of the parameters included in the event. A trip blank was analyzed for VOCs.

As part of the routine event, the monitoring wells were purged using low-flow sampling protocols or were purged to dryness prior to sample collection following methods described in the Post-Closure Plan. The wells were sampled immediately following purging in low-flow wells and

were sampled when adequate recharge had occurred in wells that were purged dry. Samples were collected from wells purged dry no later than 24 hours after purging was completed.

Field measurements of depth to water, pH, temperature, specific conductance, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured and recorded at each well. Depth to water, pH, temperature, and specific conductance measurements were used to monitor stabilization during purging for the purpose of determining when adequate purging had occurred in low-flow wells prior to sample collection. Field water-quality meters were calibrated and/or checked each day prior to sampling and the results of each calibration check are recorded on the field meter calibration forms, which are included in Appendices A and B.

Sample water for dissolved metals analysis was field filtered through inline 0.45-micron filters attached directly to the pump discharge tubing at each well.

A routine well inspection was completed at the time water levels were collected during the event. Obstructions below the top of the PVC well casing in BTI piezometers 12-4 and 12-5 precluded the measurement of a water levels at those locations. Piezometers 12-4 and 12-5 are immediately adjacent to BTI piezometer MP-214R and BTI monitoring well MP-404, respectively, which were accessible for water-level measurements. Options to remedy the obstructions at 12-4 and 12-5 will be evaluated prior to completing the 2022 first semiannual sampling event. There were no other well integrity issues observed during the event. The results of well integrity inspections performed at each monitoring well and piezometer and any corrective actions taken are recorded on inspection reports on file at the Site.

The field information forms and laboratory analytical data report for the event are included in Appendix A. Water levels, purge information, sample observations, and field parameters measured at each well at the time of purging and sampling are included on the field information forms.

2.2 Water Levels and Groundwater Flow

Groundwater flow conditions have been characterized for the 2021 second semiannual event using the October 4, 2021 water-level elevations measured in the monitoring wells and piezometers. All water levels were measured prior to purging any well and are summarized for the Upper Sand, 880 Sand, Channel Sand, and BTI in Tables 1A through 1D, respectively.

Figure 2 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Upper Sand at the time of the October 2021 sampling event. The Upper Sand is not present beneath the regulated units where it was excavated during construction, nor is it present in other areas of the facility located outside of its natural areal extent shown on Figure 2. Water levels and flow orientations in the Upper Sand during the event were consistent with previous observations, with groundwater flow generally toward the south in the vicinity of the regulated units.

The groundwater flow velocity in the Upper Sand at the time of the October 2021 sampling event has been calculated using the following formula:

$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ = average linear flow velocity in feet per day (ft/d)

K = hydraulic conductivity (ft/d)

i = hydraulic gradient (dimensionless)

n = effective porosity (percent)

Assuming: K = 5.0 x 10^{-3} centimeters per second (cm/s), or 14 ft/d, based on the 1989 RCRA Facility Investigation (RFI); i = 2.9 x 10^{-2} in October 2021; and n = 25%; the calculated average linear groundwater flow velocity in the Upper Sand in the vicinity of the regulated units was approximately 1.6 ft/d during the event.

Figure 3 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the 880 Sand at the time of the October 2021 event. As with the Upper Sand discussed above, the 880 Sand is not present where it was excavated beneath the regulated units and has limited natural areal extent outside of the units. Water levels and flow orientations in the 880 Sand during the event were consistent with previous observations. The groundwater flow direction in the vicinity of the regulated units was generally toward the south, with slight southeastward and southwestward variations in some areas (Figure 3).

Assuming: $K = 1.0 \times 10^{-2}$ cm/s (28.3 ft/d) (RFI); $i = 2.2 \times 10^{-2}$ in October 2021; and n = 25%; the calculated average linear groundwater flow velocity in the 880 Sand in the vicinity of the regulated units was approximately 2.5 ft/d during the event.

Figure 4 shows the contoured water-level elevations and groundwater flow conditions within the Channel Sand at the time of the sampling event. Water levels and flow orientations were consistent with previous observations. The groundwater flow direction in the Channel Sand follows the discrete nature of the unit and showed an eastward component of flow in the northwestern half of the facility and a south-southeastward component of flow in the vicinity of SCMF 10 during the event.

Assuming: $K = 1.0 \times 10^{-1}$ cm/s (283 ft/d) (RFI); $i = 4.3 \times 10^{-4}$ in October 2021; and n = 25%; the calculated average linear groundwater flow velocity in the Channel Sand in the vicinity of the regulated units was approximately 0.5 ft/d during the event.

Figure 5 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Bedrock-Till Interface (BTI). October 2021 water levels and flow orientations were generally consistent with previous observations. The groundwater flow direction in the BTI varies across the site as shown on Figure 5 and is characterized as southwesterly in the western part of the site, southerly in the central area, and southeasterly in the eastern part of the site.

Assuming: K = 5.0 x 10^{-5} cm/s (0.14 ft/d) (RFI); i = 7.2 x 10^{-3} in October 2021; and n = 20%; the calculated average linear groundwater flow velocity in the BTI in the vicinity of the regulated units was approximately 5.0 x 10^{-3} ft/d during the event.

The general flow directions and velocities discussed above for each of the four monitoring zones are consistent with previous observations. The adequacy of well placement in the groundwater monitoring network has been evaluated using the October 2021 groundwater flow conditions and the requirements of OAC Rule 3745-54-97(A). Based upon that review, the groundwater monitoring network for the Detection Monitoring Program at the Aber Road facility continues to consist of a sufficient number of appropriately placed monitoring wells to detect statistically significant concentrations of hazardous constituents downgradient of the regulated units.

2.3 Sample Analyses and Quality Assurance

The analytical results for all inorganic parameters at each well in the Upper Sand, 880 Sand, Channel Sand, and Bedrock-Till Interface are summarized on Tables 2, 3, 4, and 5, respectively. Table 6 summarizes the field-bias (i.e., field blank and trip blank) and laboratory method blank results from the event. The analytical methods, PQLs (identified as "RL" in the laboratory reports), and method detection limits (MDLs) are shown on the laboratory analytical report included in Appendix A. All laboratory analyses of groundwater samples were performed by Eurofins TestAmerica Laboratories (ETA) of Amherst, New York. All field analyses were performed by Eagon personnel. The field and laboratory analytical results for October 2021 will be entered into the facility's 2021 annual groundwater reporting electronic database that will be submitted to Ohio EPA by March 1, 2022.

Duplicate samples were collected from monitoring wells MP-250A, MP-281C, and MP-401A during the October 2021 event. The duplicate results are in close agreement with their associated monitoring well sample results. Relative percent differences (RPD) for constituents detected in all of the original and duplicate samples are shown next to their respective original well sample results on Tables 2 through 4 and were below an RPD of 5 for all analytes.

A field blank sample (Field Blank – DMP) also was collected for QA/QC purposes and was prepared using laboratory supplied, reagent-grade deionized water. The field blank was analyzed for all parameters included in the monitoring event. There were no quantified detections of any constituent analyzed in the field blank. A trip blank prepared by the laboratory was analyzed for VOCs and there were no detections.

Laboratory QA/QC was evaluated internally by laboratory personnel and a summary narrative of that evaluation is included in Appendix A. No QA/QC issues noted by the laboratory required corrective action. All results for the event are considered representative.

3.0 STATISTICAL ANALYSIS

Statistical analysis of the October 2021 semiannual DMP monitoring results was completed in accordance with the statistical program detailed in Section 11 (Groundwater Statistical Analysis Plan) of the Post-Closure Plan (September 2021). The October 2021 results for the eight dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were statistically evaluated for the two point-of-compliance (POC) Channel Sand monitoring wells (MP-281C and MP-406C) and the 16 POC BTI monitoring wells (MP-233R, MP-234R, MP-235R, MP-237, MP-238R, MP-241R, MP-244R, MP-250, MP-274, MP-279, MP-280 and MP-281, MP-404, MP-407, MP-408, and MP-409). In addition, statistical analysis of the results for the 62 indicator VOCs has been performed for all downgradient monitoring wells in all four monitoring horizons.

Statistical analyses were performed via the comparison of the October 2021 results to intrawell prediction limits calculated for the dissolved indicator metals using the *Sanitas*™ statistical software package, as presented in the September 2021 Post-Closure Plan. The VOC results were compared to their respective PQLs.

3.1 Background Data

The intrawell statistical methods used to evaluate the dissolved metals results at the Aber Road facility involve comparisons between monitoring data collected during a background period to future semiannual sampling results from the same well to determine if the results are statistically significant. VOC results are compared to their respective PQLs. Current summary background statistics computed for each downgradient well, for each RCRA metal, are presented in Appendix C.

3.2 Statistical Analysis of October 2021 Dissolved Metals Results

The results of the statistical analyses for the dissolved metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were completed for the Channel Sand and BTI zones and are presented in Appendix C. The initial, October 2021 result for dissolved barium at BTI well MP-274 (0.48 mg/L) exceeded the respective intrawell statistical limit of 0.45 mg/L. The well was resampled for dissolved barium on December 6, 2021. The resample result of 0.43 mg/L did not confirm the October exceedance; therefore, the original exceedance was not confirmed and no further action relative to dissolved barium at MP-274 is necessary. No confirmed statistically significant dissolved metals results were identified during the event.

As with past events, arsenic and barium were detected at most wells. Cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above their PQLs at any Channel Sand or BTI monitoring well during the event. Arsenic and barium are naturally occurring in all saturated intervals monitored at the site. Barium concentrations often vary seasonally in many wells but were very similar in the Channel Sand and BTI wells in October 2021 compared to the previous event completed in April 2021.

3.3 Statistical Analysis of VOCs

In accordance with the statistical analysis plan, a statistically significant result for any one of the 62 VOCs on the DMP indicator parameter list is defined as a confirmed detection at or above

the constituent's PQL at the point-of-compliance. Thus, if a VOC is detected at or above its PQL in a sample collected during a routine sampling event, and a resample and reanalysis is conducted and the VOC also is detected at or above its PQL in the resample, then the VOC result reported during the routine event is considered statistically significant.

Summaries of comparisons of the VOC results to their respective PQLs at the downgradient monitoring wells in all four monitoring zones are presented in Tables 2 through 5. An "ND" result on the tables indicates that all 62 VOCs analyzed were not detected at or above their respective PQLs for that well. There were no VOCs detected at or above their respective PQLs at any monitoring well (Appendix A). Therefore, no statistical exceedances of VOCs occurred during the event.

4.0 EVALUATION OF DISSOLVED METALS RESULTS FROM THE UPPER SAND AND 880 SAND

Semiannual dissolved metals results from the Upper Sand and 880 Sand monitoring networks are not statistically evaluated; however, those results are reviewed qualitatively for reference purposes. For the October 2021 event, time-series plots were generated for the eight dissolved metals routinely sampled in the Upper Sand and 880 Sand zones and are presented in Appendix D (Upper Sand) and Appendix E (880 Sand). Included are plots for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Dissolved arsenic and chromium results are available for wells included in the monitoring program since as far back as 1997, whereas dissolved barium, cadmium, lead, mercury, selenium, and silver have been routinely analyzed since October 2012.

Barium at Upper Sand monitoring well MP-402A (0.052 mg/L) was detected slightly above its upper historical range in October 2021. However, recent barium concentrations in the well continue to be consistent with those observed at other Upper Sand wells, including nearby wells MP-244ARR (0.069 mg/L) and MP-401A (0.046 mg/L). Changes in barium concentrations at MP-402A since 2017 (Appendix D) display seasonality common to other Upper Sand wells when compared to relatively static early results following the well's installation in 2012. Higher

concentrations are often observed at the well during the fall events compared to spring. In addition, the variability in concentrations at MP-402A since 2017, and the range of concentrations observed, are typical for the Upper Sand and suggest that barium concentrations in the well continue to normalize to the range of natural variability observed in both the Upper Sand and 880 Sand at the Site (Appendices D and E).

Arsenic concentrations at 880 Sand wells MP-230A (0.0098 mg/L) and MP-280A (0.020 mg/L) were relatively unchanged in October 2021 compared to the previous, April 2021 event and are below their respective upper-range concentrations of 0.011 and 0.025 mg/L observed at the wells in October 2020. The arsenic concentration at well MP-277A (0.013 mg/l) observed during the October 2021 event was higher than the previous range of arsenic concentrations observed at the well (i.e., 0.001 to 0.010 mg/L). The October 2021 results support previous observations that concentrations and variability of arsenic at these wells are within the normal range of concentrations observed at other Site wells installed in the 880 Sand.

Barium concentrations at 880 Sand wells MP-213A (0.077 mg/L) and MP-214BR (0.012 mg/L) in October 2021 were higher than their previous upper-range concentrations of 0.040 mg/L and 0.0091 mg/L, respectively. Both results, however, are within the range of observations for barium at other wells in the 880 Sand and Upper and saturated zones at the site.

As shown on the time-series plots, the October 2021 metals results were generally within the range of previously observed concentrations in both the Upper Sand and 880 Sand. Arsenic is typically detected in most wells and barium was detected in all Upper Sand and 880 Sand wells during the event.

No detections of any other metals at or above their respective PQLs in the 880 Sand or Upper Sand monitoring wells were identified during the event. Based on the review of the October 2021 sampling results, no additional evaluation of the Upper Sand and 880 Sand monitoring zones is warranted at this time.

5.0 MAJOR ION RESULTS FROM ALL WELLS

As requested by Clermont County, biennial (every two years) sampling for major anions and cations was performed during the October 2021 event. The results of the major ion analyses at each well are included in Tables 2 through 5 for reference only. Sampling for the major ions is not part of the RCRA post-closure monitoring program for the facility. The results may be utilized in evaluating future potential changes in groundwater quality over time, if deemed appropriate.

6.0 SUMMARY

Analysis of the 2021 second semiannual DMP groundwater quality sampling results collected in October 2021 identified an initial statistically significant result for dissolved barium at BTI well MP-274. A resample collected in December 2021 did not confirm the original result at MP-274 and no further action for dissolved barium at MP-274 is warranted. Therefore, no confirmed statistically significant concentrations of the indicator constituents were observed at any monitoring well downgradient of the regulated units at the Aber Road facility.

Consistent with past TSCA sampling results, no PCBs were detected in any monitoring well during the event.

The next routine semiannual DMP groundwater sampling event is tentatively scheduled for April 2022.

TABLES

TABLE 2.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
UPPER SAND ZONE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-206AR 10/6/2021	MP-231AR 10/6/2021	MP-235CR 10/5/2021	MP-244ARR 10/6/2021	MP-401A 10/5/2021	Dup-DMP#3 10/5/2021	RPD	MP-402A 10/6/2021	MP-403A 10/5/2021	MP-404A 10/5/2021	MP-405A 10/6/2021
Arsenic, Dissolved	mg/L	<0.001	**0.0035**	<0.001	**0.0110**	<0.001	<0.001	NC	**0.0067**	<0.001	<0.001	<0.001
Barium, Dissolved	mg/L	**0.0093**	**0.0063**	**0.012**	**0.069**	**0.046**	**0.046**	0.0%	**0.052**	**0.0130**	**0.053**	**0.018**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NC	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NC	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	NC	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NC	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	NC	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-210AR 10/5/2021	MP-211BR 10/5/2021	MP-213A 10/6/2021	MP-214BR 10/5/2021	MP-228AR 10/6/2021	MP-230A 10/6/2021
Arsenic, Dissolved	mg/L	**0.0014**	<0.001	<0.001	**0.0020**	**0.0056**	**0.0098**
Barium, Dissolved	mg/L	**0.061**	**0.042**	**0.077**	**0.0120**	**0.030**	**0.033**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-232A 10/6/2021	MP-233AR 10/5/2021	MP-234AR 10/6/2021	MP-235BR 10/5/2021	MP-250A 10/5/2021	Dup-DMP#2 10/52021	RPD
Arsenic, Dissolved	mg/L	**0.0081**	**0.0049**	**0.0030**	**0.0030**	**0.0080**	**0.0081**	1.2%
Barium, Dissolved	mg/L	**0.028**	**0.024**	**0.0110**	**0.014**	**0.0330**	**0.0340**	3.0%
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NC
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NC
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	NC
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NC
VOCs	ug/L	ND	ND	ND	ND*	ND*	ND	NC

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-251A 10/5/2021	MP-274A 10/5/2021	MP-277A 10/6/2021	MP-280A 10/6/2021	MP-401B 10/5/2021
Arsenic, Dissolved	mg/L	**0.0031**	**0.0890**	**0.0130**	**0.0200**	**0.0060**
Barium, Dissolved	mg/L	**0.110**	**0.029**	**0.026**	**0.025**	**0.041**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 4.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
CHANNEL SAND ZONE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-281C 10/5/2021	Dup-DMP#1 10/5/2021	RPD	MP-286C 10/6/2021	MP-406C 10/6/2021
Arsenic, Dissolved	mg/L	**0.0043**	**0.0044**	2.3%	**0.0033**	**0.0034**
Barium, Dissolved	mg/L	**0.055**	**0.055**	0.0%	**0.140**	**0.150**
Cadmium, Dissolved	mg/L	<0.001	<0.001	NC	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	NC	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	NC	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	NC	<0.003	<0.003
VOCs	ug/L	ND	ND	NC	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-228R 10/6/2021	MP-233R 10/5/2021	MP-234R 10/6/2021	MP-235R 10/5/2021	MP-237 10/5/2021	MP-238R 10/5/2021	MP-241R 10/5/2021	MP-244R 10/6/2021	MP-250 10/5/2021
Arsenic, Dissolved	mg/L	**0.0031**	**0.0018**	<0.001	<0.001	<0.001	<0.001	0.0010	<0.001	**0.0013**
Barium, Dissolved	mg/L	**0.071**	**0.440**	**0.039**	**0.046**	**0.030**	**0.047**	**0.048**	**0.020**	**0.048**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-274 10/5/2021	MP-274 12/6/2021	MP-279 10/6/2021	MP-280 10/6/2021	MP-281 10/6/2021	MP-404 10/5/2021	MP-407 10/6/2021	MP-408 10/6/2021	MP-409 10/5/2021
Arsenic, Dissolved	mg/L	<0.001	--	**0.0013**	**0.0230**	<0.001	**0.0014**	<0.001	**0.0770**	**0.0016**
Barium, Dissolved	mg/L	**0.480**	**0.430**	**1.100**	**0.330**	**0.280**	**0.410**	**0.730**	**0.720**	**0.13**
Cadmium, Dissolved	mg/L	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	--	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	--	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	--	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 6.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
QA/QC SAMPLES
OCTOBER 2021
CECOS - ABER ROAD FACILITY

Constituent	Field Blank DMP 10/6/2021	Method Blank	Trip Blank
Arsenic, Dissolved	<0.001	<0.001 (3)	--
Barium, Dissolved	<0.002	<0.002 (3)	--
Cadmium, Dissolved	<0.001	<0.001 (3)	--
Chromium, Dissolved	<0.005	<0.005 (3)	--
Lead, Dissolved	<0.005	<0.005 (3)	--
Mercury, Dissolved	<0.0002	<0.0002 (3)	--
Selenium, Dissolved	<0.015	<0.015 (3)	--
Silver, Dissolved	<0.003	<0.003 (5)	--
VOCs	ND	ND (8)	ND

ND - no detections at or above PQL.

-- Not Analyzed

( ) Number of Method Blank batches run by laboratory for parameter.

See Laboratory Report QA/QC section for separate analyses.

SECTION 1
PART A
ATTACHMENT II

CMI PERFORMANCE MONITORING EVALUATION

EAGON & ASSOCIATES, INC.

100 Old Wilson Bridge Road
Suite 115
Worthington, Ohio 43085
(614) 888-5760
eagoninc.com

May 21, 2021

Mr. Andrew Thompson
CECOS International, Inc.
5092 Aber Road
Williamsburg, Ohio 45176

RE: Administrative Order on Consent, O&M Progress Report No. 50
Exhibit 5 - Corrective Measures Implementation Performance Monitoring Evaluation
CECOS International, Inc. - Aber Road Facility
Docket No. V-W-024-94
EPA I.D. No. OHD 087 433 744

Dear Mr. Thompson:

Transmitted herewith is the Corrective Measures Implementation (CMI) Performance Monitoring Evaluation for CMI data collected during the April 2021 monitoring event at the closed Aber Road Facility. This evaluation is being provided to you for inclusion as Exhibit 5 of the Operation and Maintenance (O&M) Progress Report No. 50 that is to be submitted to the United States Environmental Protection Agency (U.S. EPA) by June 10, 2021.

APRIL 2021 MONITORING RESULTS

Compounds of Interest/Target Compound List Volatile Organic Compound Results – Outside Slurry Wall Monitoring Wells

The April 2021 monitoring event was performed in accordance with Section 5 of the July 2009 CMI O&M Manual. The event represented year thirteen, quarter two of CMI monitoring as listed on Table 5.2 (Post Shutdown Monitoring Program/Groundwater Monitoring) of the CMI O&M Manual. Monitoring wells located outside the slurry wall were sampled for Compounds of Interest/Target Compound List (COI/TCL) volatile organic compounds (VOCs). Monitoring wells located outside the slurry wall are sampled semiannually in the spring and fall and locations inside the slurry wall are sampled annually in the fall.

During the April 2021 event, there were no detections of COI VOCs at or above their respective method detection limits (MDLs) in the monitoring locations outside the slurry wall. A summary of the April 2021 COI VOC results is presented on attached Table 1. Formal data validation of the April 2021 results will be included in CMI Report No. 51 due December 10, 2021.

Groundwater Cleanup Standards (GWCS) shown on Table 1 and listed in Section 5.2 of the July 2009 CMI O&M Manual continue to be achieved for the COIs at the 14 CMI wells located outside the slurry wall.

Semiannual Gradient Analysis and Elevation Differences for Nested Wells/Piezometers

Section 5.6 of the July 2009 CMI O&M Manual requires semiannual groundwater elevation measurement for a minimum of five years at six nested well pairs that straddle the slurry wall to assist in identifying hydraulic gradients across the slurry wall following shutdown of the gradient control pumping system in 2009. The initial five-year gradient monitoring period was completed as of the October 2013 event. As a result, CECOS may request U.S. EPA approval in the future to reduce the frequency of measuring groundwater elevations for gradient analysis to an annual basis.

Groundwater elevation measurements were collected for the CMI gradient analysis well network on April 5, 2021, prior to initiating the CMI groundwater sampling event. Figure 1 shows the locations of the six nested wells. As required in Section 5.7.2 of the CMI O&M Manual, gradient evaluations for the six nested wells are presented in Exhibit 2 and time-series plots depicting elevation differences for each nested pair are presented herein as Figures 2 through 7.

During the April 2021 event, well pair #3 (880PZ-2 and MP-305A) indicated an inward gradient. Well pairs #1 (USPZ-1 and MP-303B), #2 (880PZ-1 and MP-208), #4 (MP-238AR and 880PZ-3), #5 (880PZ-4 and MP-304A), and #6 (880PZ-5 and MP-241AR) indicated outward gradients. It is noted that the differential at well pair #4 approached nil with a difference of only 0.01 feet. Outward gradients have been observed at these well pairs at times during past events and conditions in April 2021 were generally consistent with gradient relationships observed since system shutdown in 2009 (Figures 2 through 7). Well pairs #1 (Figure 2) and #4 (Figure 5) display seasonal effects on gradient relationships, with inward gradients commonly occurring.

As discussed in the June 30, 2008 "Aber Road Petition to Cease Groundwater Recovery", advective groundwater flow through the slurry wall is negligible due to the low hydraulic conductivity of the bentonite wall and the fact that the Upper Sand and 880 Sand zones were removed during slurry wall construction; therefore, the presence of an outward differential at some well pairs is not expected to result in contaminant transport across the slurry wall. Semiannual monitoring of wells outside the slurry wall continues to demonstrate that COI/TCL VOCs are not being transported across the slurry wall's hydraulic barrier.

Semiannual Potentiometric Surface Maps

Section 5.6 of the July 2009 CMI O&M Manual requires monitoring wells listed in Section 5.4 of the Manual to be used in developing semiannual groundwater elevation maps both inside and outside the slurry wall. This is as specified in Condition #1 of the March 31, 2009 U.S. EPA "Final Approval with Conditions/Modifications to Shutdown the Groundwater Gradient Control System."

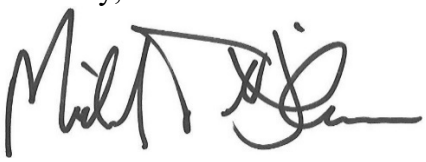
Potentiometric surface maps for CMI wells screened in the Upper Sand, 880 Sand, and Bedrock-Till Interface (BTI) zones in April 2021 are shown on Figures 8, 9 and 10, respectively. Groundwater flow conditions in the Upper Sand and 880 Sand were similar in nature to historical conditions. The removal of formation material during cell construction and installation of the slurry wall as a hydraulic barrier resulted in localized isolation of the remaining interior sands. Therefore, water levels in the Upper Sand and 880 Sand in the CMI area generally do not define well organized potentiometric

surfaces. Groundwater flow in the BTI, which is below the depth of the slurry wall, was toward the southwest during the event in the vicinity of the CMI area, consistent with previous observations.

The next CMI performance monitoring event is scheduled for fall 2021 and will include sampling of the CMI monitoring wells located both outside and inside the slurry wall.

Please contact me at (614) 888-5760 if you have any questions.

Sincerely,

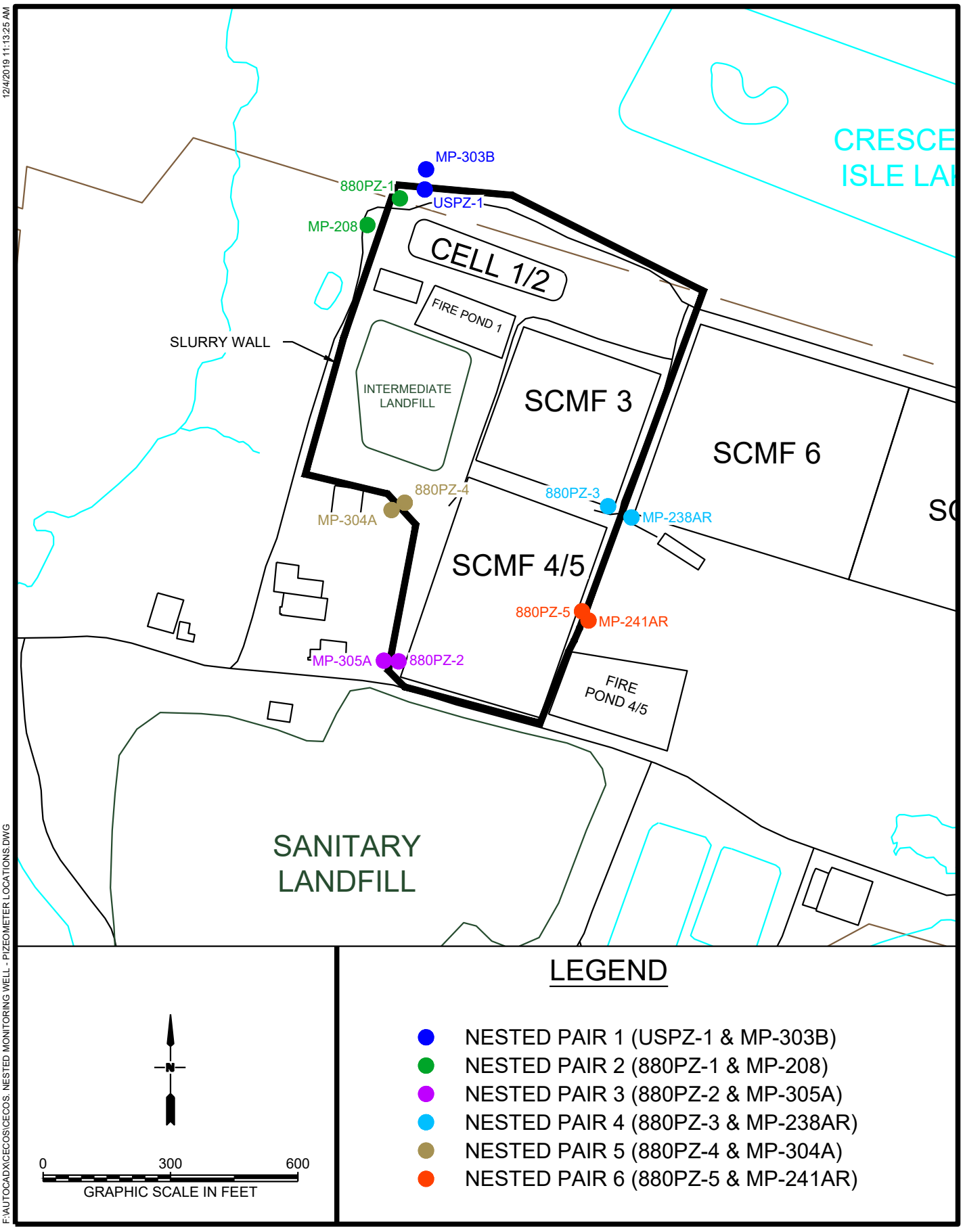


Michael T. Gibson, CPG
Hydrogeologist

MTG/ns
encl.

FIGURES

© CECOS International (2019)



Aber Road Facility, Williamsburg, Ohio

FIGURE 1. NESTED MONITORING WELL / PIEZOMETER LOCATIONS

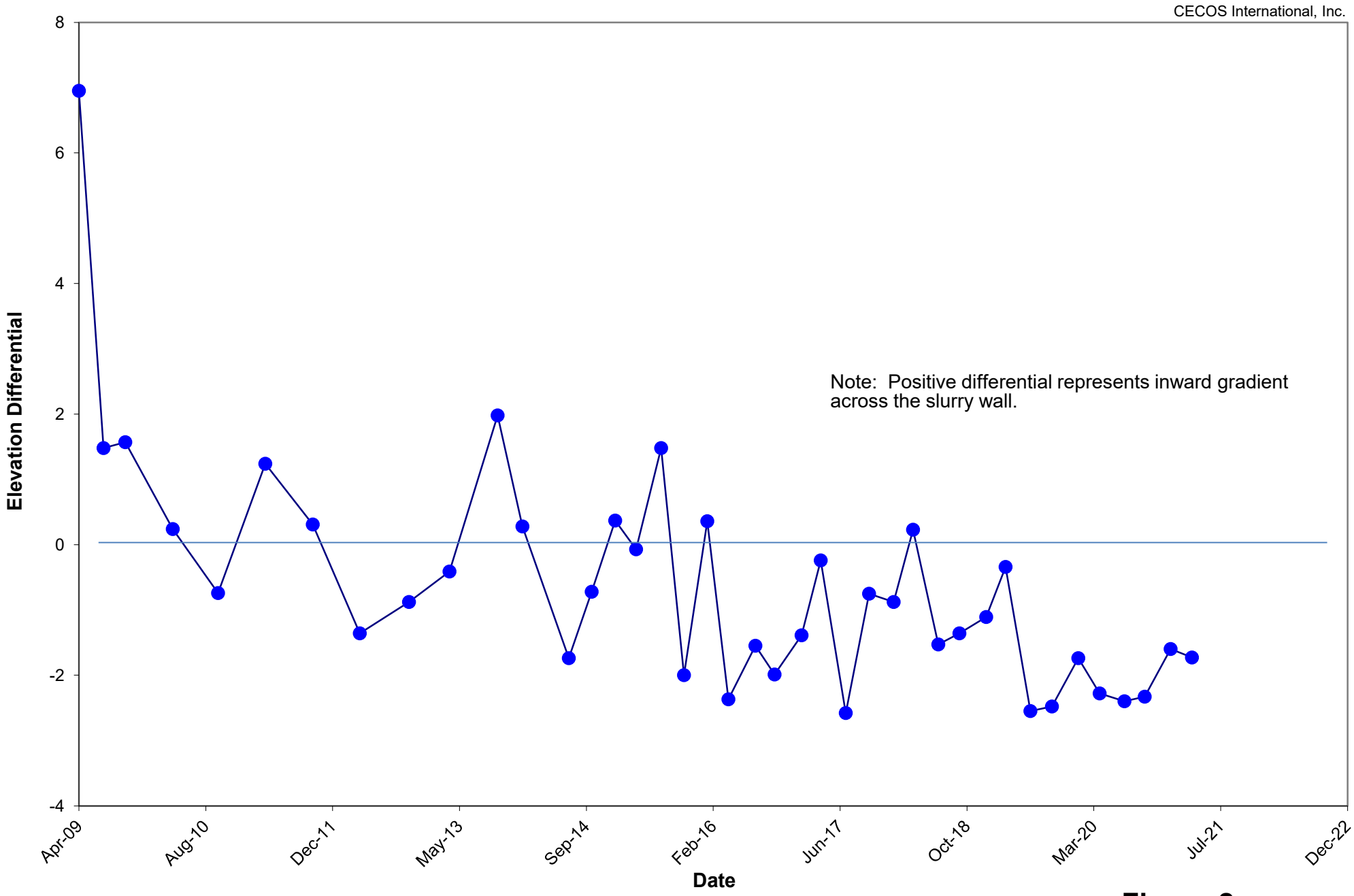
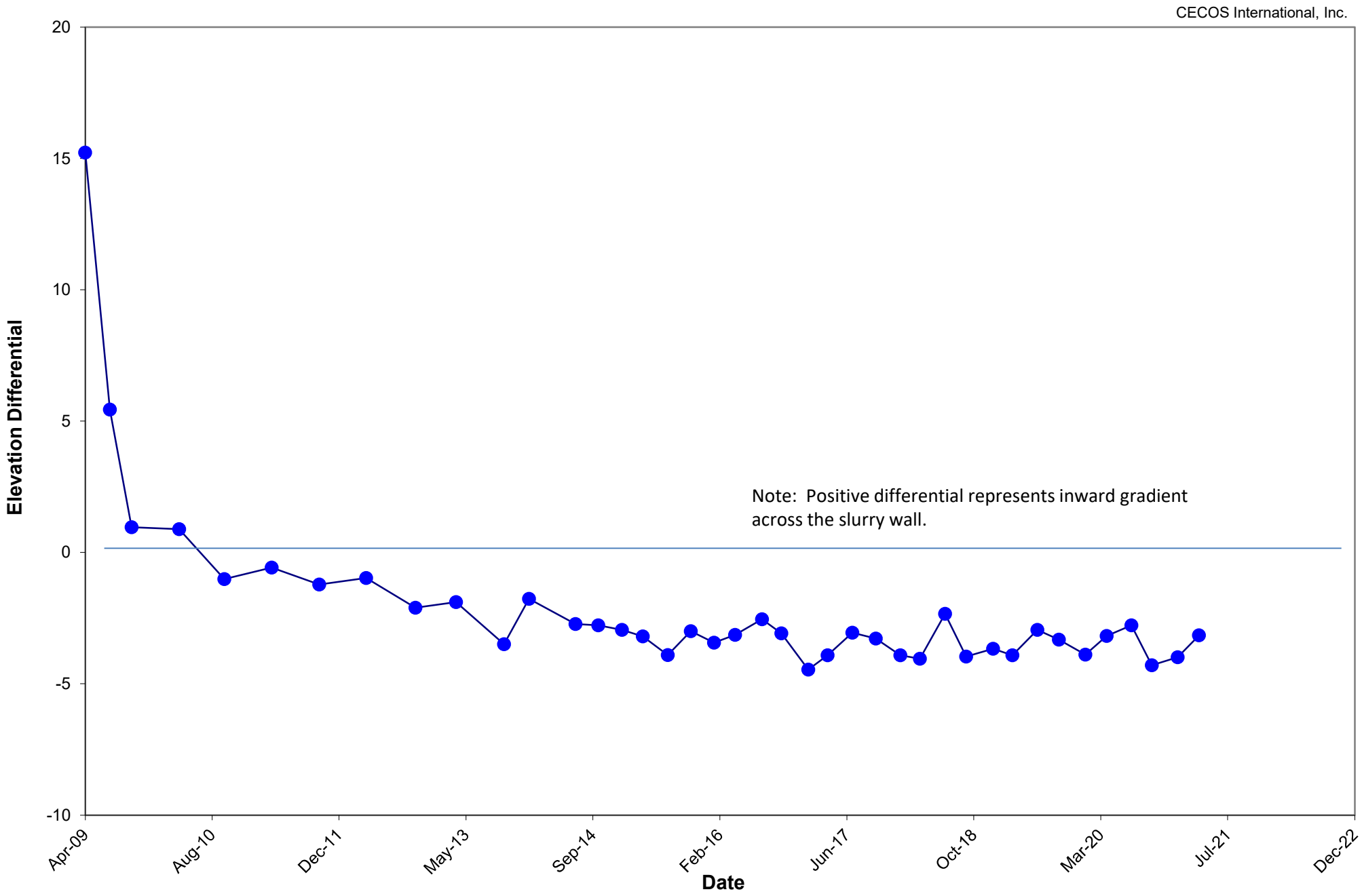


Figure 2
Elevation Differential for
Well Pair 1: MP-303B & USPZ-1

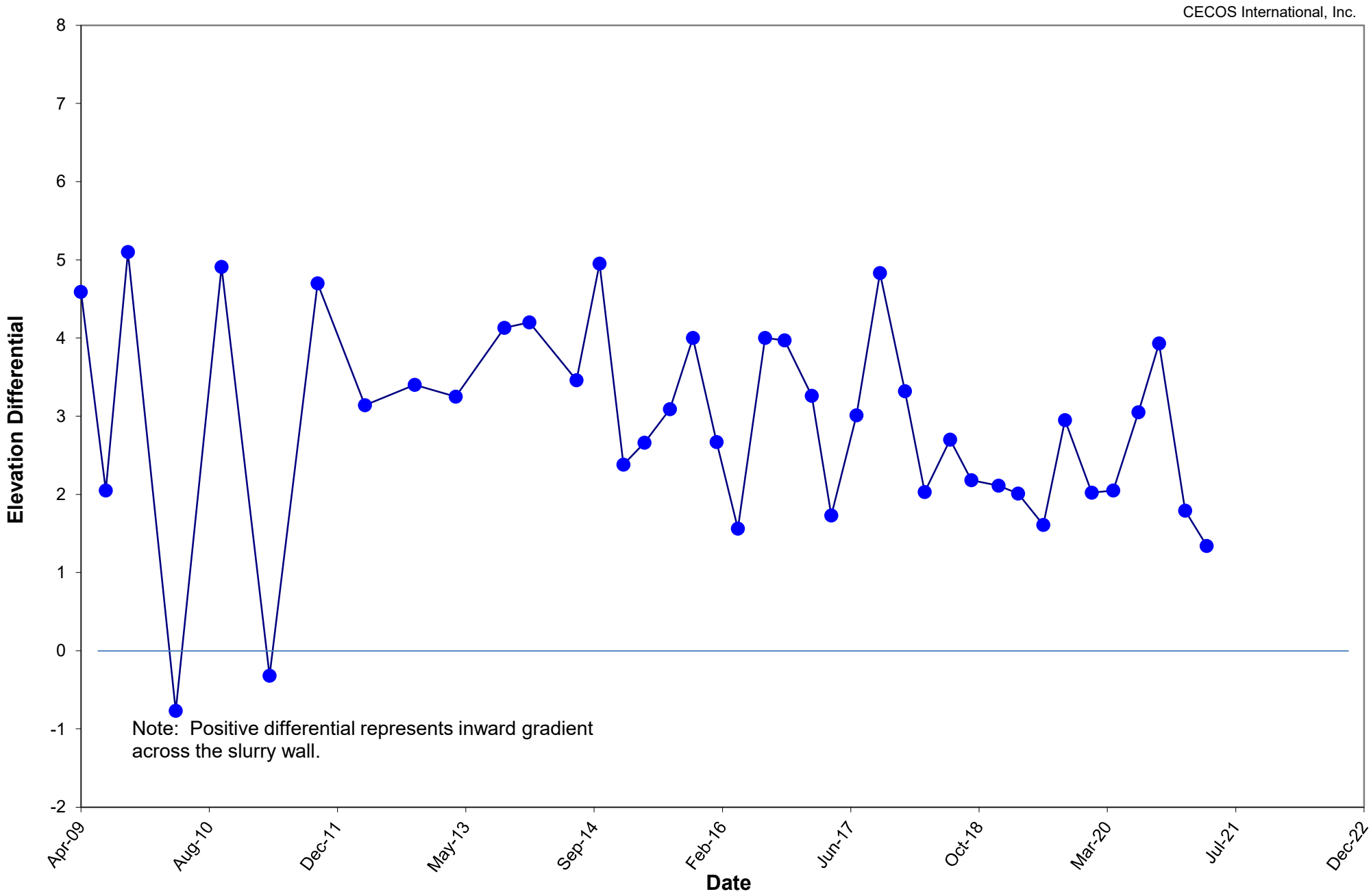
Aber Road Facility
Williamsburg, Ohio

CECOS International, Inc.



Aber Road Facility
Williamsburg, Ohio

Figure 3
Elevation Differential for
Well Pair 2: MP-208 & 880PZ-1



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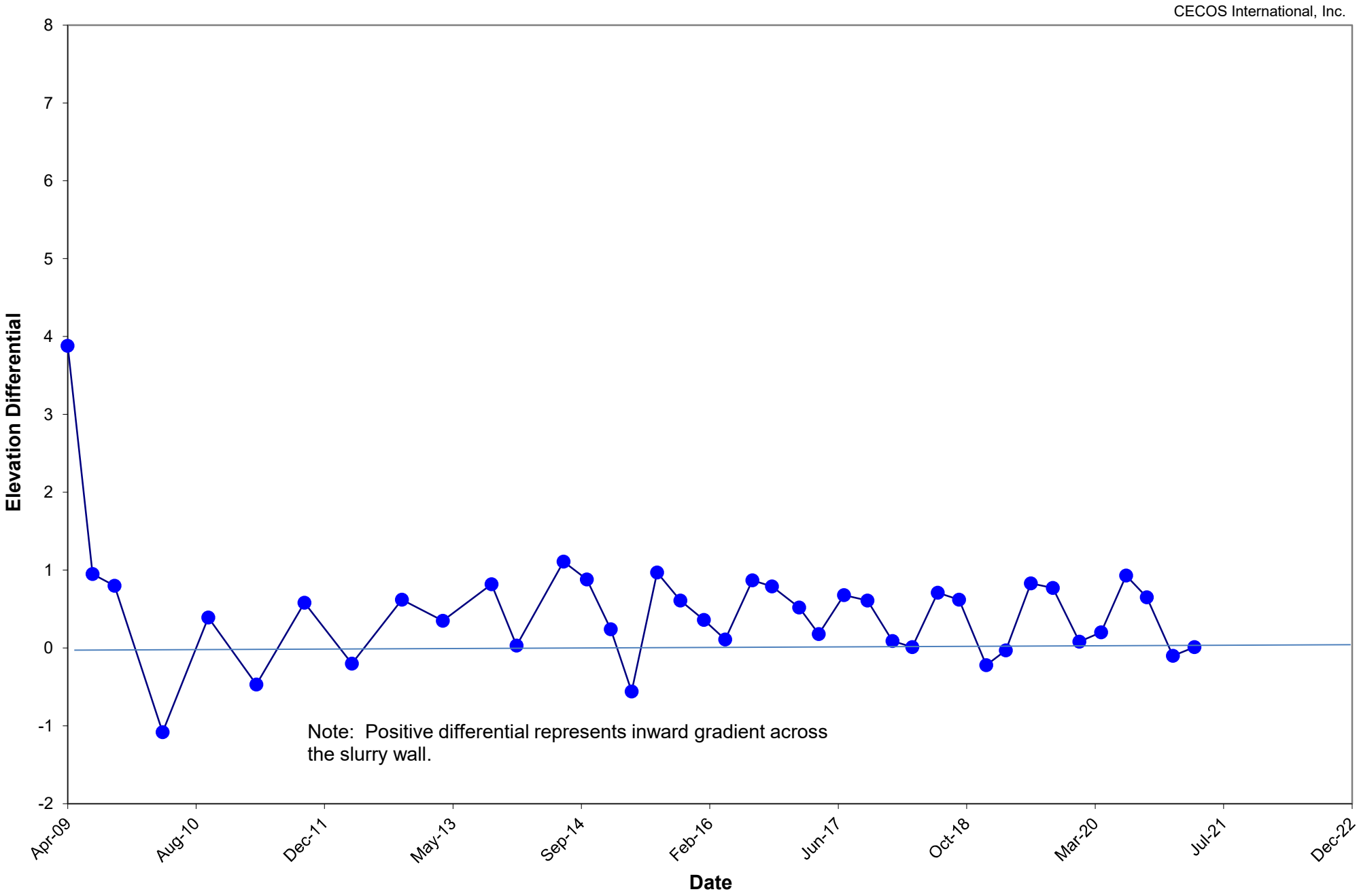
Williamsburg, Ohio

Figure 4
Elevation Differential for
Well Pair 3: MP-305A & 880PZ-2

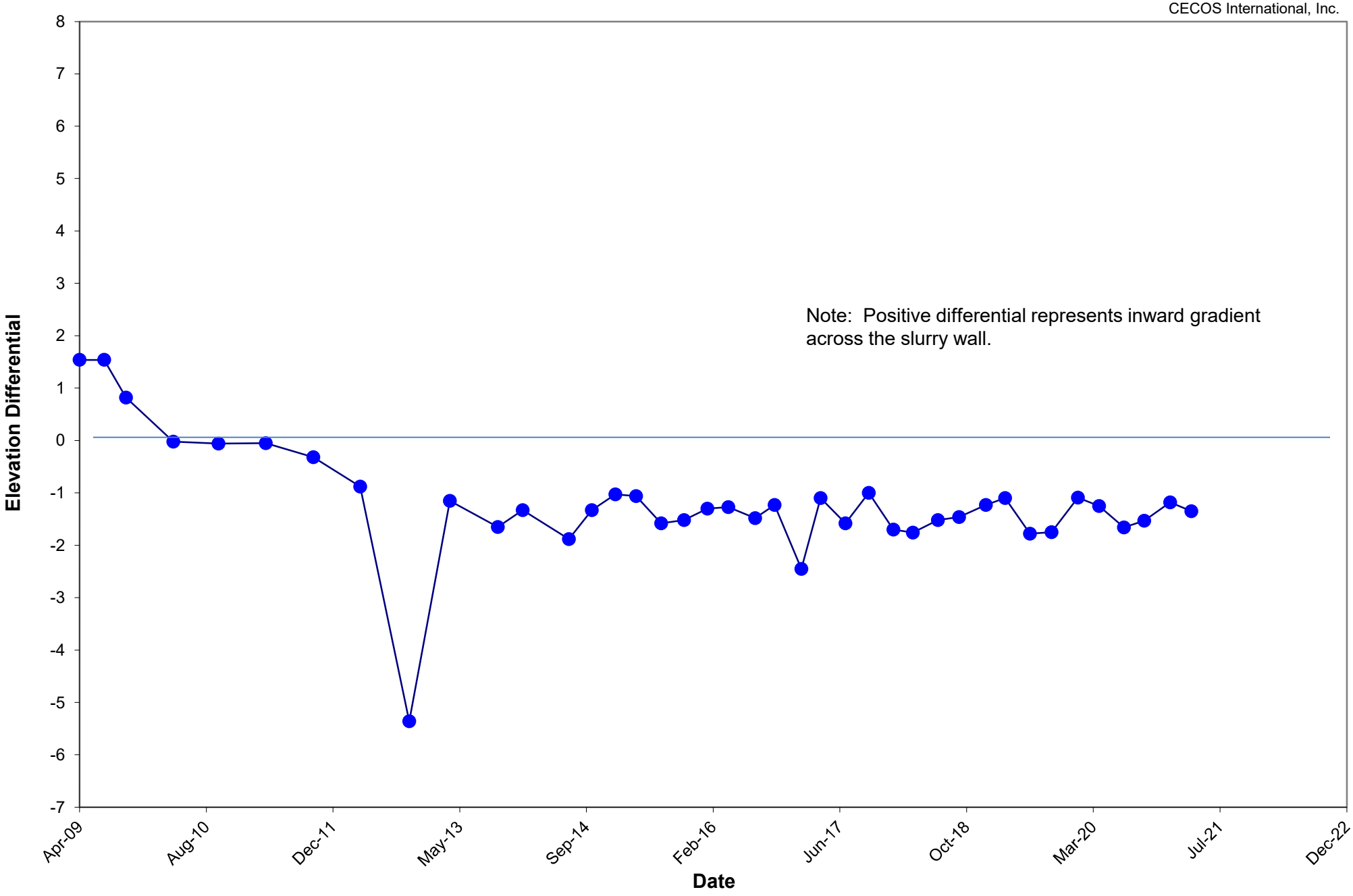
CECOS International, Inc.



Aber Road Facility
Williamsburg, Ohio

Figure 5
Elevation Differential for
Well Pair 4: MP-238AR & 880PZ-3

CECOS International, Inc.



Aber Road Facility
Williamsburg, Ohio

Figure 6
Elevation Differential for
Well Pair 5: MP-304A & 880PZ-4

CECOS International, Inc.

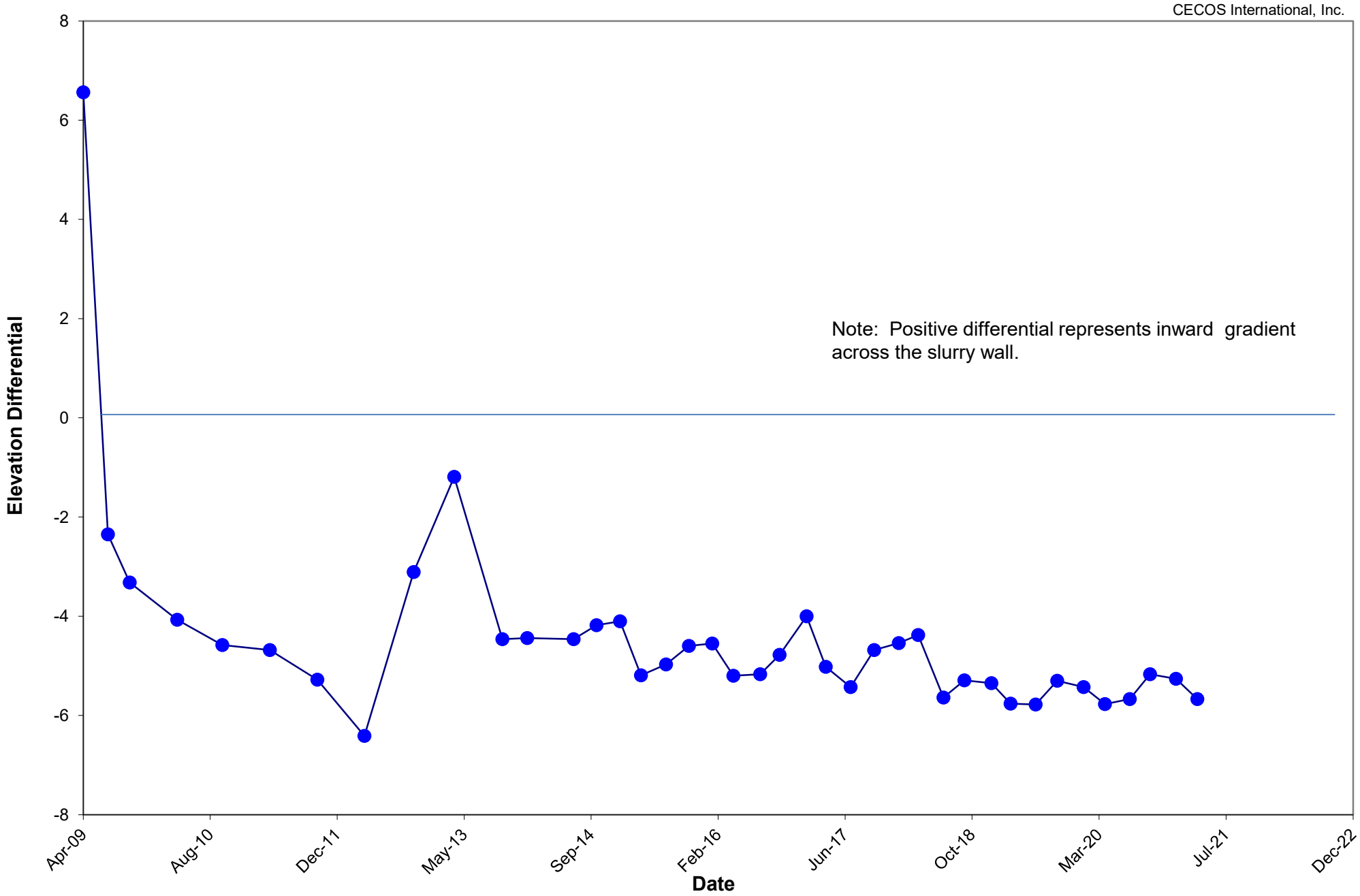


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Figure 7
Elevation Differential for
Well Pair 6: MP-241AR & 880PZ-5

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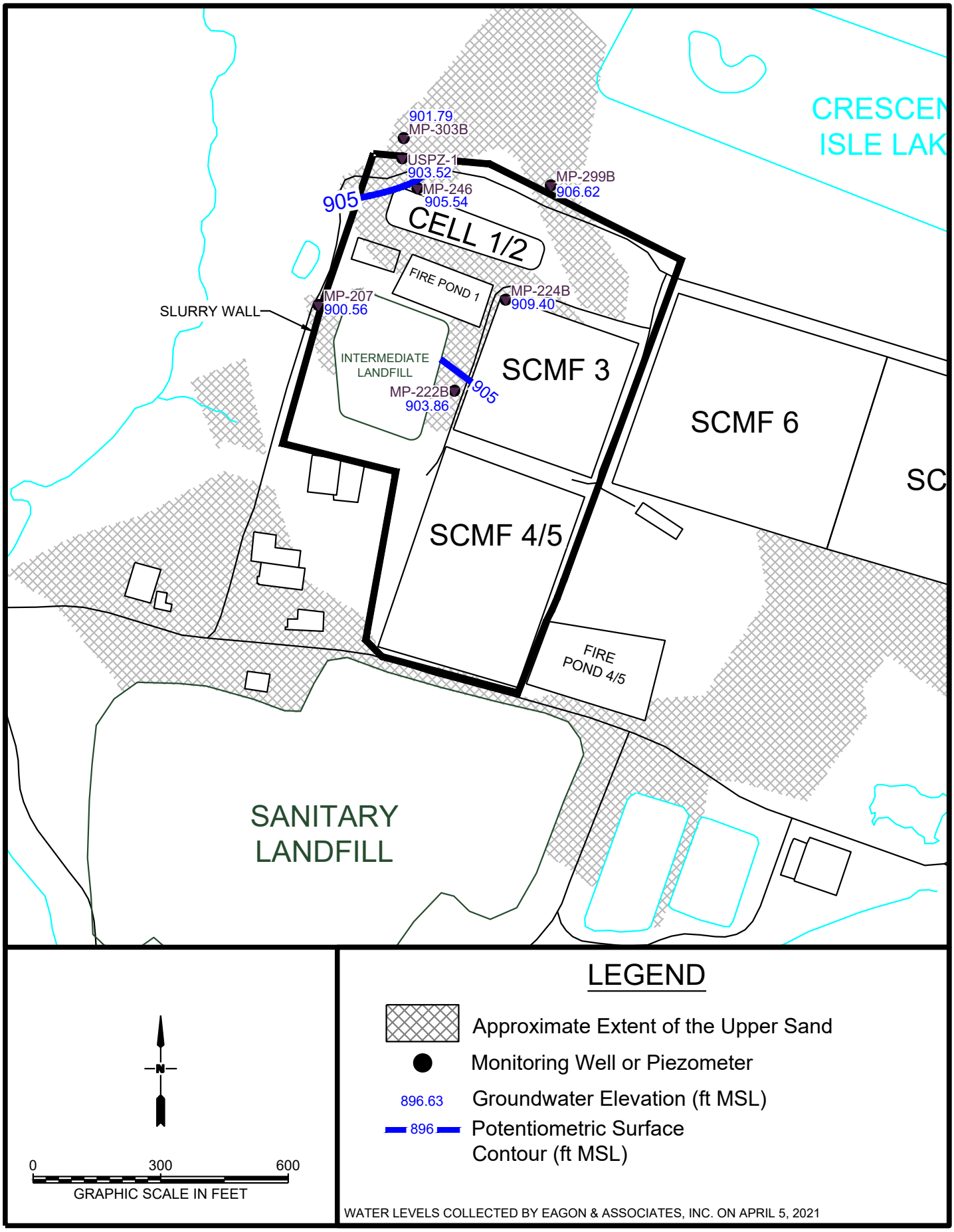

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FIGURE 8. POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE - CMI WELLS, APRIL 5, 2021

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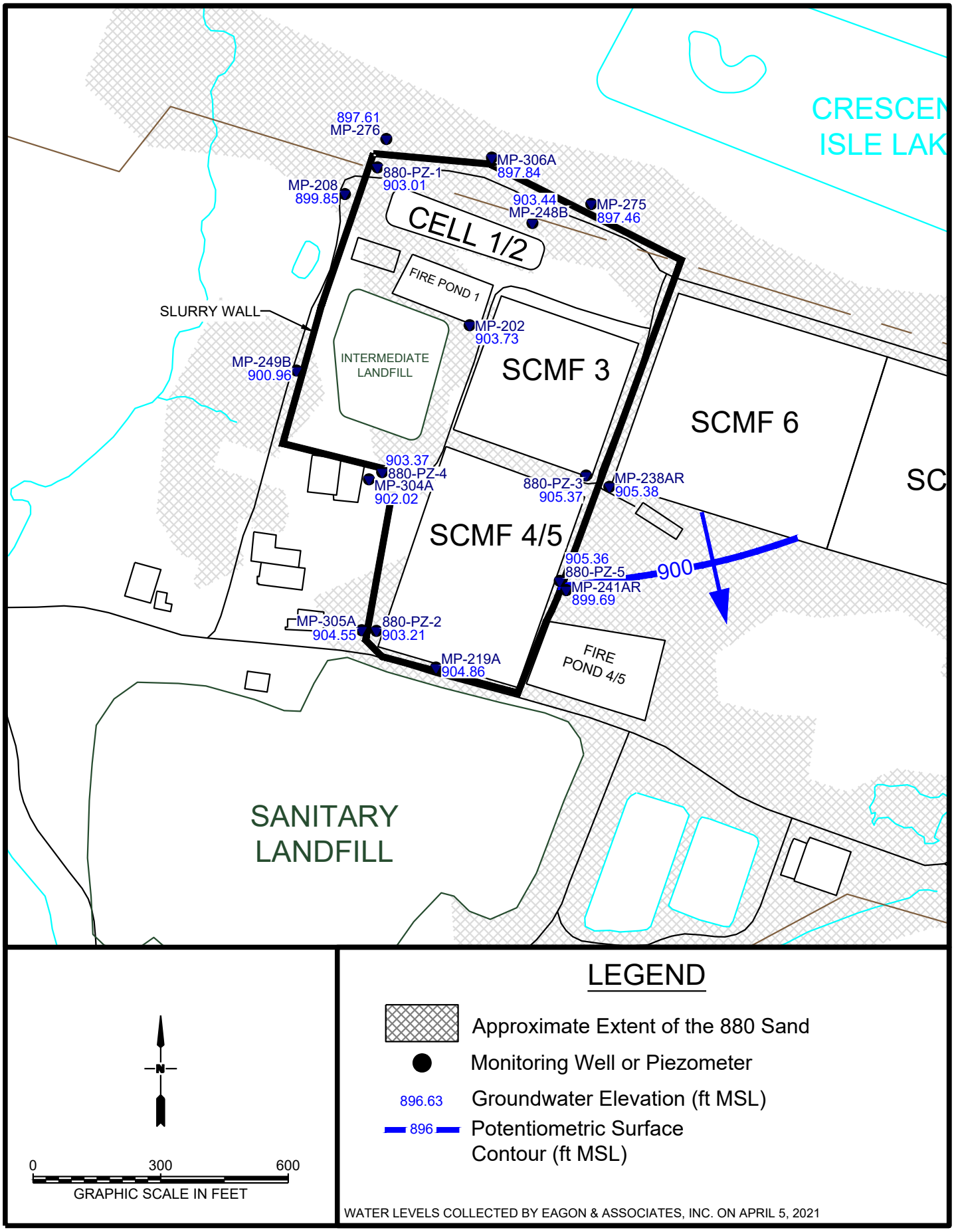

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FIGURE 9. POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE - CMI WELLS, APRIL 5, 2021

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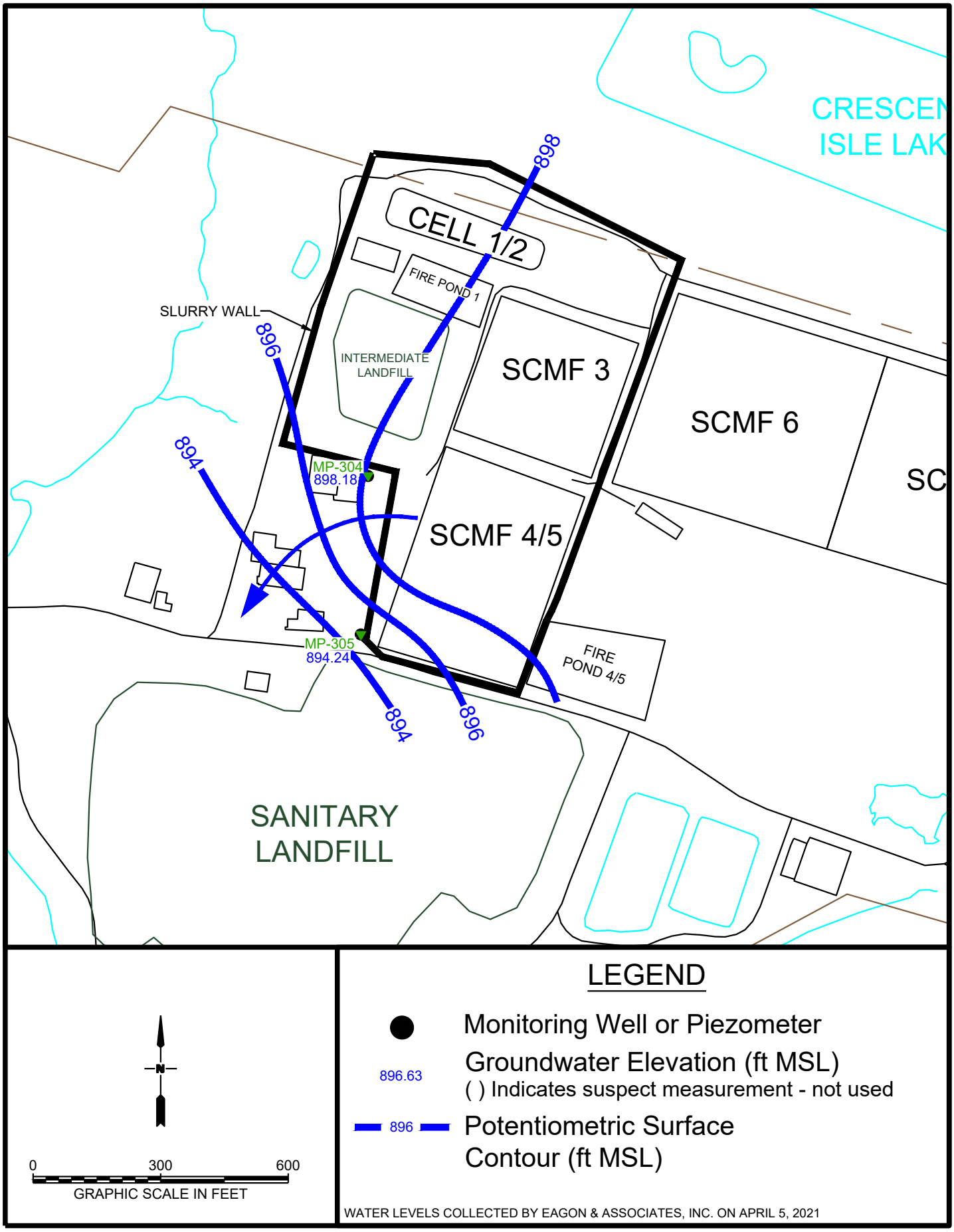

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FIGURE 10. POTENTIOMETRIC SURFACE OF THE BEDROCK TILL INTERFACE - CMI WELLS, APRIL 5, 2021

TABLES

TABLE 1.
SUMMARY OF APRIL 2021 CONSTITUENT OF INTEREST (COI) RESULTS AND COMPARISON TO CLEANUP STANDARDS AND ACTION LEVELS[1]
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Well	Sampling Date	Acetone (ug/L)	Benzene (ug/L)	Methyl ethyl ketone (ug/L)	Chloro-ethane (ug/L)	Dichloro-difluoro-methane (ug/L)	1,1-Dichloro-ethane (ug/L)	1,2-Dichloro-ethane (ug/L)	1,1-Dichloro-ethylene (ug/L)	cis-1,2-Dichloro-ethylene (ug/L)	trans-1,2-Dichloro-ethylene (ug/L)	Methylene chloride (ug/L)	Tetra-chloro-ethylene (ug/L)	1,1,1-Trichloro-ethane (ug/L)	Trichloro-ethylene (ug/L)	Trichloro-fluoro-methane (ug/L)	Vinyl chloride (ug/L)
Cleanup Standard (ug/L)[1]		**10000**	**5**	**61000**	**292000**	**20000**	**10000**	**5**	**7**	**70**	**100**	**5**	**5**	**200**	**5**	**31000**	**2**
Basis		**Health**	**MCL**	**Health**	**Health**	**Health**	**Health**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**Health**	**MCL**
Action Level (ug/L)[1]		**4000**	**3**	**1900**	**43000**	**1000**	**2000**	**3**	**4**	**40**	**50**	**3**	**3**	**100**	**3**	**3000**	**1**
Wells Located Outside the Slurry Wall																	
MP-207	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-208	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-238AR	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-241AR	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-249B	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-275	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-276	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-299B	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-303B	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304A	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-305	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-305A	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-306A	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Wells/Underdrains Located Inside the Slurry Wall																	
MP-202	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-219A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-222B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-224B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-246	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-248B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

[1] Cleanup Standards and Action Levels are relevant to Corrective Measures Implementation (CMI) wells located outside the slurry wall.
NS: Not sampled

EAGON & ASSOCIATES, INC.

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November 26, 2021

Mr. Andrew Thompson
CECOS International, Inc.
5092 Aber Road
Williamsburg, Ohio 45176

RE: Administrative Order on Consent, O&M Progress Report No. 51
Exhibit 5 - Corrective Measures Implementation Performance Monitoring Evaluation
CECOS International, Inc. - Aber Road Facility
Docket No. V-W-024-94
EPA I.D. No. OHD 087 433 744

Dear Mr. Thompson:

Transmitted herewith is the Corrective Measures Implementation (CMI) Performance Monitoring Evaluation for CMI data collected during the October 2021 monitoring event at the closed Aber Road Facility. This evaluation is being provided to you for inclusion as Exhibit 5 of the Operation and Maintenance (O&M) Progress Report No. 51 that is to be submitted to the United States Environmental Protection Agency (U.S. EPA) by December 10, 2021.

OCTOBER 2021 MONITORING RESULTS

Compounds of Interest/Target Compound List Volatile Organic Compound Results – Inside & Outside Slurry Wall Monitoring Wells

The October 2021 monitoring event was performed in accordance with Section 5 of the July 2009 CMI O&M Manual. The event represented year thirteen, quarter four of CMI monitoring as listed on Table 5.2 (Post Shutdown Monitoring Program/Groundwater Monitoring) of the CMI O&M Manual. Monitoring wells located outside the slurry wall were sampled for Compounds of Interest/Target Compound List (COI/TCL) volatile organic compounds (VOCs). Monitoring wells located outside the slurry wall are sampled semiannually in the spring and fall and locations inside the slurry wall are sampled annually in the fall.

During the October 2021 event, there were no detections of COI VOCs at or above their respective method detection limits (MDLs) in the monitoring locations outside the slurry wall. Quantified detections of some COI VOCs were detected in three (MP-202, MP-222B, and MP-246) of the six monitoring wells located inside the slurry wall and were within the range of historical detections at those wells. A summary of the October 2021 COI VOC results is presented on attached Table 1. Formal data validation of the October 2021 results will be included in CMI Report No. 52 due June 10, 2022.

Groundwater Cleanup Standards (GWCS) shown on Table 1 and listed in Section 5.2 of the July 2009 CMI O&M Manual continue to be achieved for the COIs at the 14 CMI wells located outside the slurry wall.

Semiannual Gradient Analysis and Elevation Differences for Nested Wells/Piezometers

Section 5.6 of the July 2009 CMI O&M Manual requires semiannual groundwater elevation measurement for a minimum of five years at six nested well pairs that straddle the slurry wall to assist in identifying hydraulic gradients across the slurry wall following shutdown of the gradient control pumping system in 2009. The initial five-year gradient monitoring period was completed as of the October 2013 event. As a result, CECOS may request U.S. EPA approval in the future to reduce the frequency of measuring groundwater elevations for gradient analysis to an annual basis.

Groundwater elevation measurements were collected for the CMI gradient analysis well network on October 4, 2021, prior to initiating the CMI groundwater sampling event. Figure 1 shows the locations of the six nested wells. As required in Section 5.7.2 of the CMI O&M Manual, gradient evaluations for the six nested wells are presented in Exhibit 2 and time-series plots depicting elevation differences for each nested pair are presented herein as Figures 2 through 7.

During the October 2021 event, well pairs #3 (880PZ-2 and MP-305A) and #4 (MP-238AR and 880PZ-3) indicated inward gradients. Well pairs #1 (USPZ-1 and MP-303B), #2 (880PZ-1 and MP-208), #5 (880PZ-4 and MP-304A), and #6 (880PZ-5 and MP-241AR) indicated outward gradients. Outward gradients have been observed at these well pairs at times during past events and conditions in October 2021 were generally consistent with gradient relationships observed since system shutdown in 2009 (Figures 2 through 7). Well pairs #1 (Figure 2) and #4 (Figure 5) display seasonal effects on gradient relationships, with inward gradients commonly occurring.

As discussed in the June 30, 2008 "Aber Road Petition to Cease Groundwater Recovery", advective groundwater flow through the slurry wall is negligible due to the low hydraulic conductivity of the bentonite wall and the fact that the Upper Sand and 880 Sand zones were removed during slurry wall construction; therefore, the presence of an outward differential at some well pairs is not expected to result in contaminant transport across the slurry wall. Semiannual monitoring of wells outside the slurry wall continues to demonstrate that COI/TCL VOCs are not being transported across the slurry wall's hydraulic barrier.

Semiannual Potentiometric Surface Maps

Section 5.6 of the July 2009 CMI O&M Manual requires monitoring wells listed in Section 5.4 of the Manual to be used in developing semiannual groundwater elevation maps both inside and outside the slurry wall. This is as specified in Condition #1 of the March 31, 2009 U.S. EPA "Final Approval with Conditions/Modifications to Shutdown the Groundwater Gradient Control System."

Potentiometric surface maps for CMI wells screened in the Upper Sand, 880 Sand, and Bedrock-Till Interface (BTI) zones in October 2021 are shown on Figures 8, 9 and 10, respectively. Groundwater flow conditions in the Upper Sand and 880 Sand were similar in nature to historical

conditions. The removal of formation material during cell construction and installation of the slurry wall as a hydraulic barrier resulted in localized isolation of the remaining interior sands. Therefore, water levels in the Upper Sand and 880 Sand in the CMI area generally do not define well organized potentiometric surfaces. Groundwater flow in the BTI, which is below the depth of the slurry wall, was toward the southwest during the event in the vicinity of the CMI area, consistent with previous observations.

COMPARISON OF SIX COI/TCL VOC RESULTS AT MP-219A, MP-246, & MP-248B TO CBPSs & SCREENING LEVELS

The June 30, 2008 *Aber Road Petition to Cease Groundwater Recovery* submittal noted six COI/TCL VOCs at wells inside the slurry wall with concentrations above the Consent Order-specified GWCSs intended to be applied at the point of compliance wells located outside the slurry wall. These compounds are 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride. The June 30, 2008 submittal contained concentration-based performance standards (CBPS) for these six parameters calculated such that if concentrations of these parameters at wells inside the slurry wall were below the CBPSs, then concentrations of these parameters in wells outside the slurry wall would remain below GWCSs for 30 years after System shutdown. The May 30, 2008 *Aber Road Petition to Cease Groundwater Recovery* (including an August 14, 2008 supplement) also developed Screening Levels (below the CBPSs) for six COI/TCL VOCs for wells MP-219A, MP-246, and MP-248B, which are located inside the slurry wall boundary. The Screening Levels were calculated using conservative fate-and-transport assumptions such that if concentrations of these parameters at wells inside the slurry wall were below the Screening Levels, then concentrations of these parameters in wells outside the slurry wall would be expected to remain below detection for 30 years after system shutdown. The CBPSs and Screening Levels for 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride can be found in Section 5.8 of the July 2009 CMI O&M Manual.

Attached Table 2 presents a comparison of the October 2021 annual results from monitoring wells MP-219A, MP-246, and MP-248B, located inside the slurry wall, to the CBPSs and Screening Levels calculated for 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride, where detected. There were no detections at or above respective method detection limits for those VOCs at MP-219A or MP-248B for the event and none of the concentrations at any of the three wells approached or exceeded their respective CBPSs. In addition, no Screening Levels were exceeded for the event, with the exception of the Screening Level of 15 ug/L for 1,2-dichloroethane (1,2-DCA) that was exceeded at MP-246 (16 ug/L). Screening Level exceedances for 1,2-DCA at MP-246 have occurred during past events; however, concentrations have not approached the conservative CBPS of 37 ug/L since system shutdown. In addition, as discussed below, it is noted that the concentration of 16 ug/L for 1,2-DCA observed at MP-246 in October 2021 was reduced from recent concentrations observed at the well.

Evaluation of the Screening-Level Exceedance at MP-246

Section 5.10 of the O&M Manual requires that an evaluation of a Screening Level exceedance be completed and submitted to U.S. EPA for approval "within 30 days of receipt of validated data." The CMI data validation is not required to be completed until the reporting period following each

semiannual sampling event. Therefore, the validation for the October 2021 event will be completed by spring 2022 and presented in Progress Report No. 52 due. However, an evaluation of the Screening Level exceedance for 1,2-DCA at MP-246 has been completed and recommendations for additional actions moving forward have developed.

As discussed above, the October 2021 1,2-DCA concentration of 16 ug/L at MP-246 remains below the CBPS of 37 ug/L. The result is also reduced from recent concentrations observed in 2014 (22 ug/L), 2015 (21 ug/L), 2017 (23 ug/L), 2018 (25 ug/L), 2019 (21 ug/L) and 2020 (24 ug/L) and remains significantly below the maximum historic concentration of 1,880 ug/L. The October 2021 result is also within the range of concentrations observed since 2000 ($\leq$ 58 ug/L).

The October 2021 results at nearby Upper Sand wells located outside the slurry wall, including MP-207, MP-299B, and MP-303B (Figure 8), remain nondetect for 1,2-DCA (Table 1) and demonstrate that the slurry wall continues to provide an effective barrier to contaminant migration in the MP-246 area. The outside results together with frequent inward or flat gradients across the slurry wall indicate that the exceedance of the conservative Screening Level for 1,2-DCA at MP-246 is not reflective of an imminent potential for the Action Level of 3 ug/L or the GWCS of 5 ug/L to be exceeded beyond the slurry wall.

Another significant variable considered during the evaluation of the Screening Level exceedance was the nature of the Upper Sand in the vicinity of MP-246 and the completion and performance characteristics of MP-246, in general. The Upper Sand horizon is approximately 1.5 feet thick at the well, from 19.5 to 21 feet below ground, and the areal extent of the zone is entirely truncated by the slurry wall. During slurry wall construction, the formation was removed via trenching and was replaced with a soil-bentonite slurry barrier. The slurry wall trench was excavated to a minimum width of two-feet. The trench extended vertically, through the Upper Sand, to below the 880 Sand. In addition to this substantial hydraulic barrier to horizontal transport, MP-246 is a low-yielding well that typically purges to dryness using volumetric purging sampling methods, which demonstrates low hydraulic conductivity of the Upper Sand zone in the vicinity of the well.

The combination of the formation characteristics in the MP-246 area, common inward or nil groundwater flow potential across the slurry wall, and the limited areal extent of the zone due to its removal during slurry wall construction, minimize the likelihood that a low-level exceedance above the Screening Level will result in detections of 1,2-DCA outside the slurry wall.

In addition to the above analysis, review of the information presented in the 2008 *Petition to Cease Groundwater Recovery* indicates that a calculated value of 18 (ml/g) was used for the organic carbon partition coefficient (K_{OC}) for 1,2-DCA. Published references for actual experimental values, including supporting documentation provided in U.S. EPA's National Primary Drinking Water Regulations, indicate K_{OC} values of at least 33 for silt loam soils such as the Upper Sand zone and the soil matrix used in the slurry. Following the approach described in the petition, using a K_{OC} value of 33 for 1,2-DCA would result in a calculated Screening Level of 22 ug/L (versus 15 ug/L). The corresponding CBPS would be 54 ug/L (versus 37 ug/L) to prevent the Cleanup Standard of 5 ug/L from potentially being exceeded in 30 years. Therefore, applying the experimentally-derived K_{OC} value of 33, the October 2021 1,2-DCA result of 16 ug/L at MP-246 is below the resulting Screening

Level of 22 ug/L and remains substantially below the 2008 CBPS of 37 ug/L and the recalculated or alternate CBPS of 54 ug/L.

As noted above and discussed in the 2008 petition to discontinue pumping operations, the calculated Screening Levels were developed as conservative (i.e., low-end) values for triggering additional evaluation of future results. Combined with the above discussion, it is our conclusion that no imminent potential exists for contaminant migration beyond the slurry wall based on the October 2021 sampling results.

Recommended Actions Based on the Evaluation of the Screening-Level Exceedance at MP-246

Section 5.10 of the O&M Plan states: "Response actions [following a screening level exceedance] may include an upgraded monitoring program to assess and predict the possible impacts on groundwater outside the slurry wall, and/or resuming the pumping of the groundwater gradient control trench (at MP-246) and/or certain wells (at MP-219A and MP-248B)." Based on the evaluation of the single Screening Level exceedance discussed above, resumption of active gradient control operations is not warranted and no modifications to the O&M monitoring program are proposed at this time.

The next CMI performance monitoring event is scheduled for spring 2022 and will include sampling of the CMI monitoring wells located outside the slurry wall.

Please contact me at (614) 888-5760 if you have any questions.

Sincerely,

Michael T. Gibson, CPG
Hydrogeologist

MTG/ns
encl.

FIGURES

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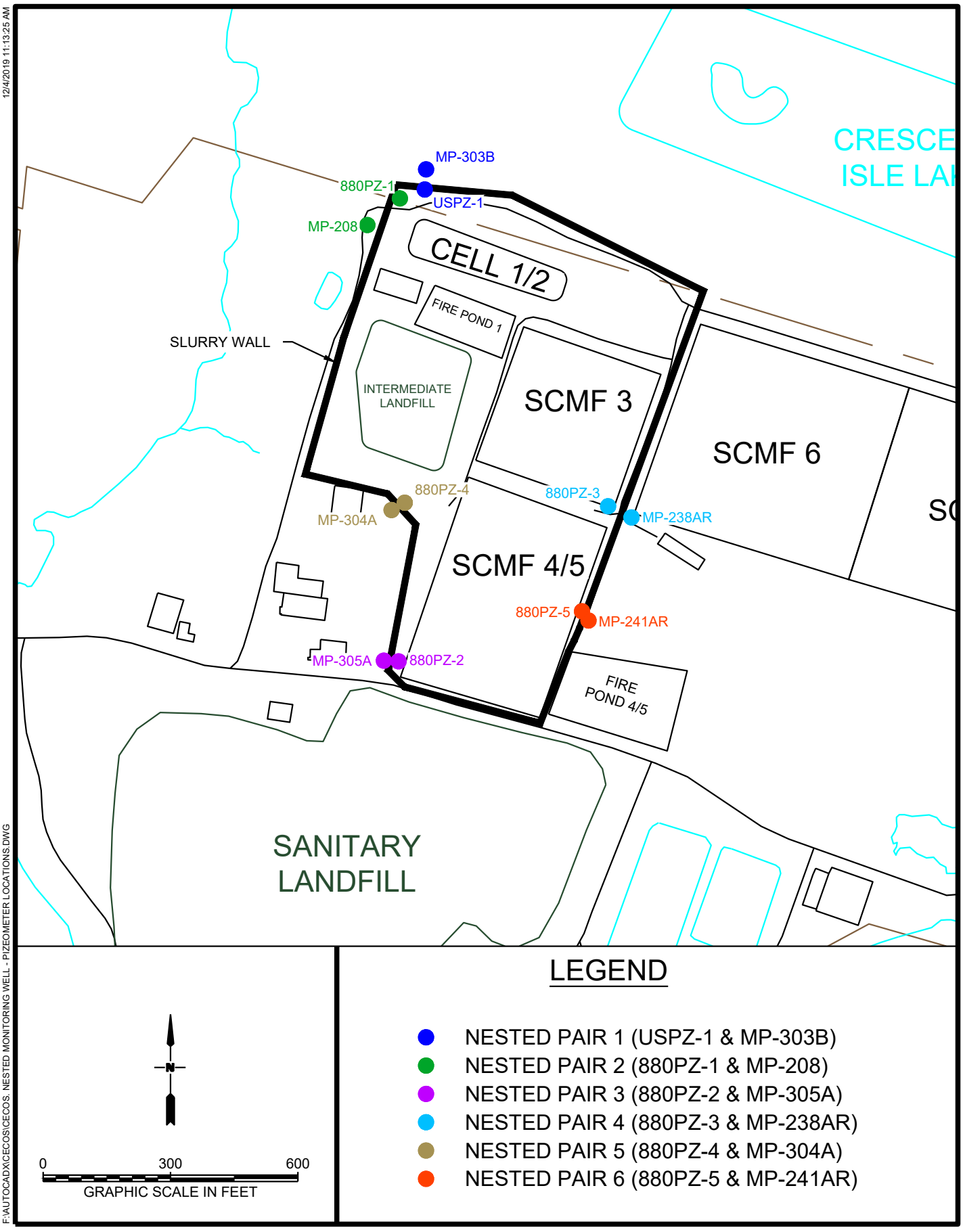

Aber Road Facility, Williamsburg, Ohio

FIGURE 1. NESTED MONITORING WELL / PIEZOMETER LOCATIONS

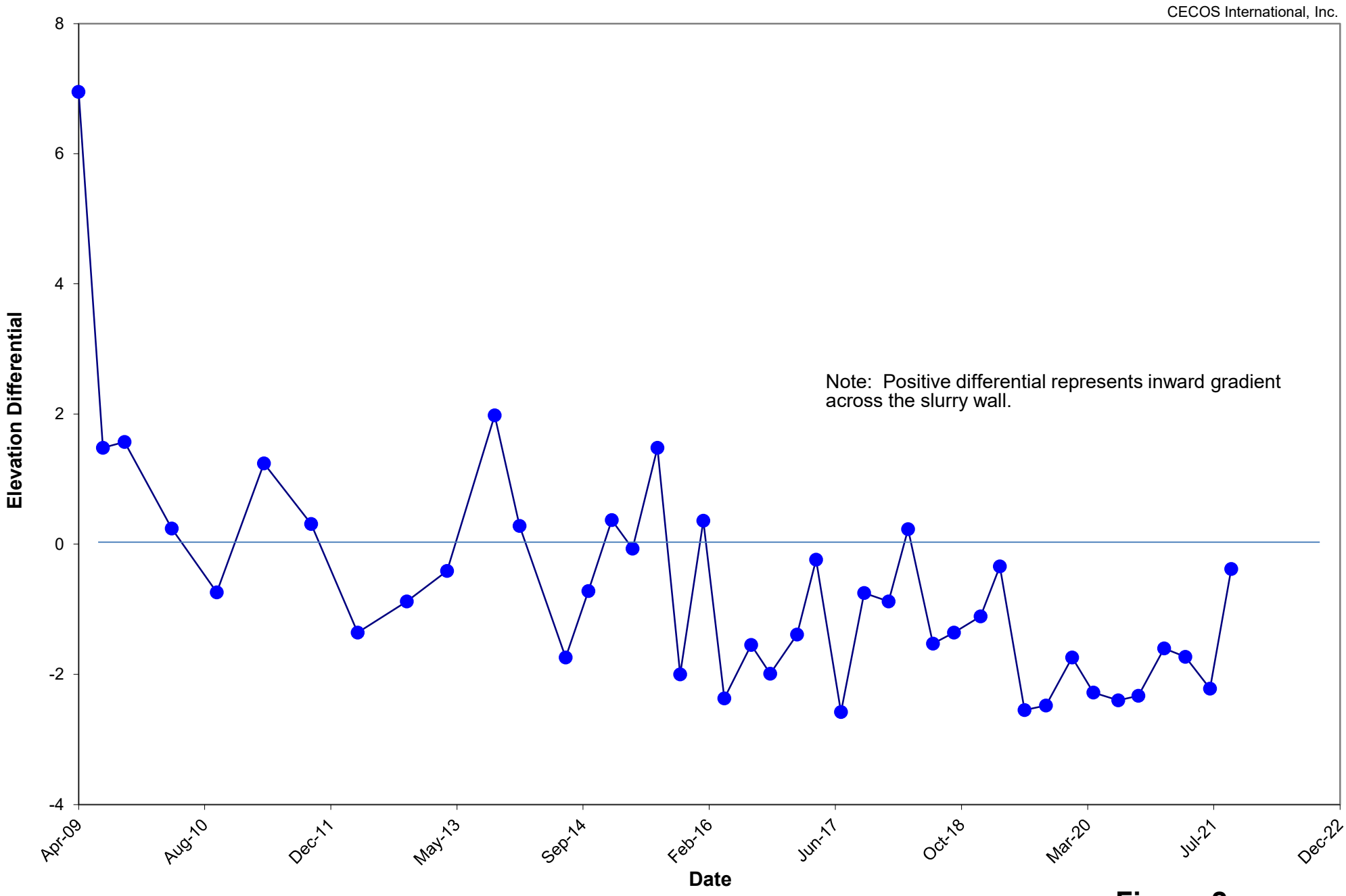

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Figure 2
Elevation Differential for
Well Pair 1: MP-303B & USPZ-1

CECOS International, Inc.

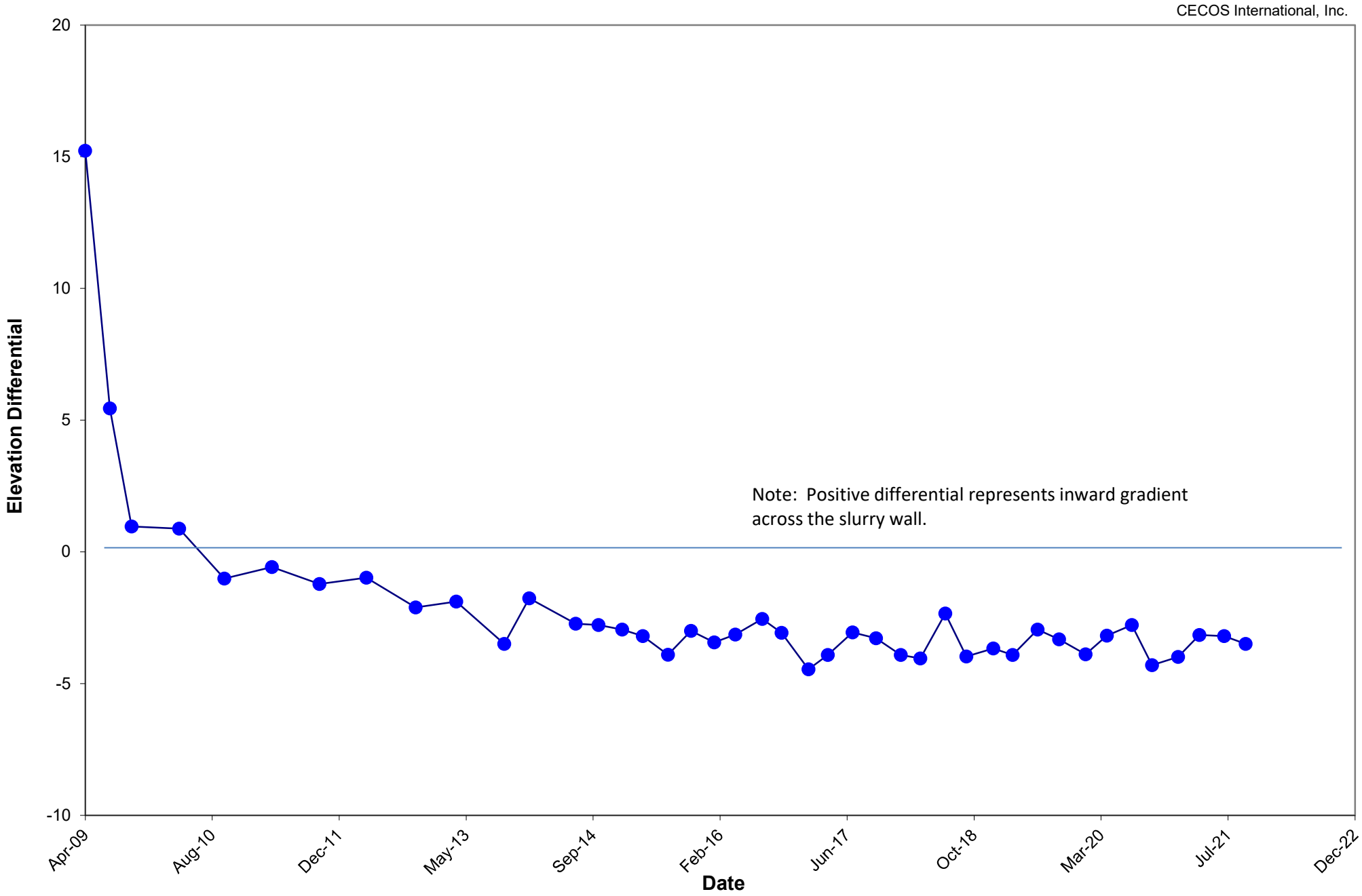

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Figure 3
Elevation Differential for
Well Pair 2: MP-208 & 880PZ-1

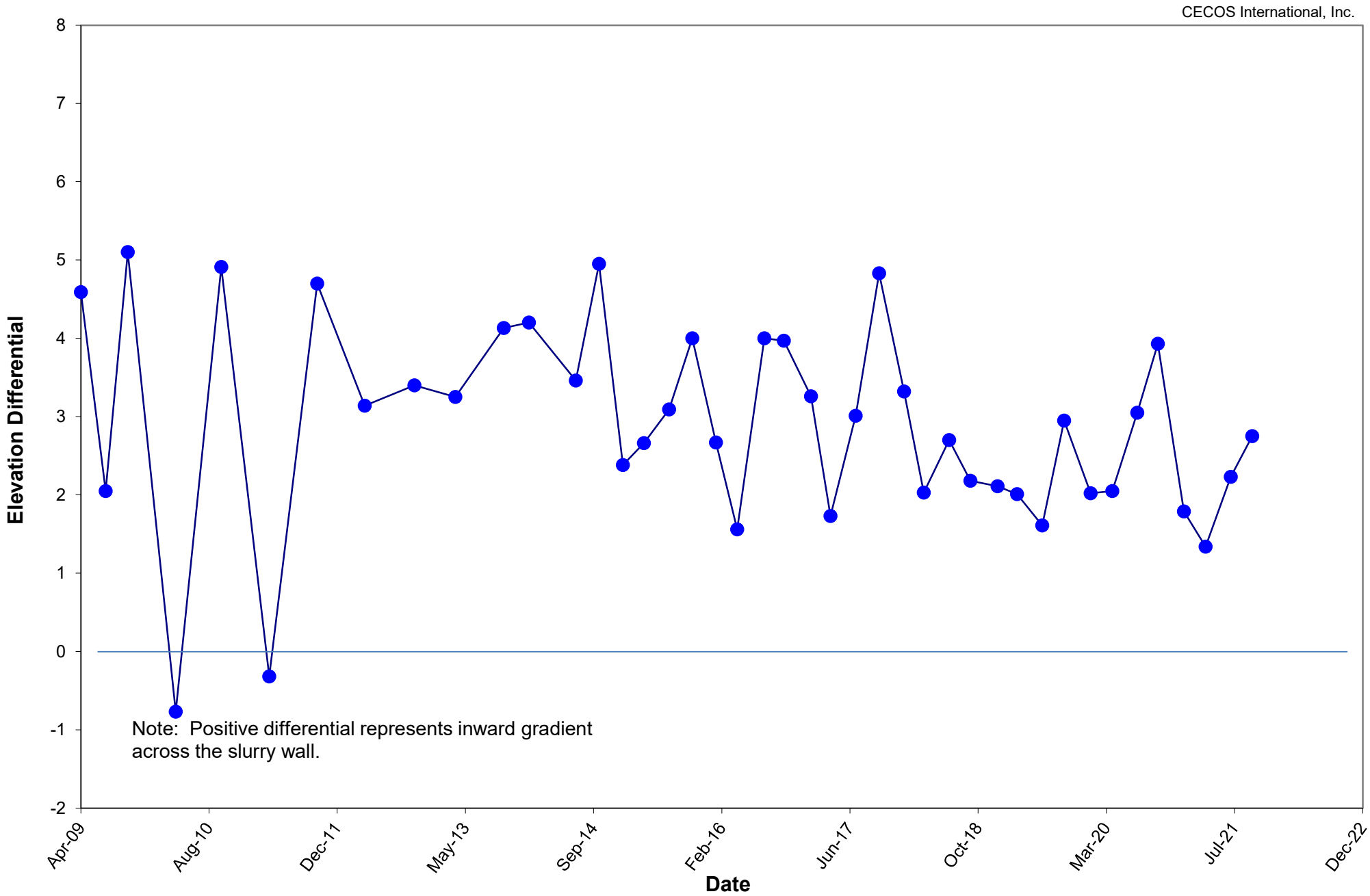

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Figure 4
Elevation Differential for
Well Pair 3: MP-305A & 880PZ-2

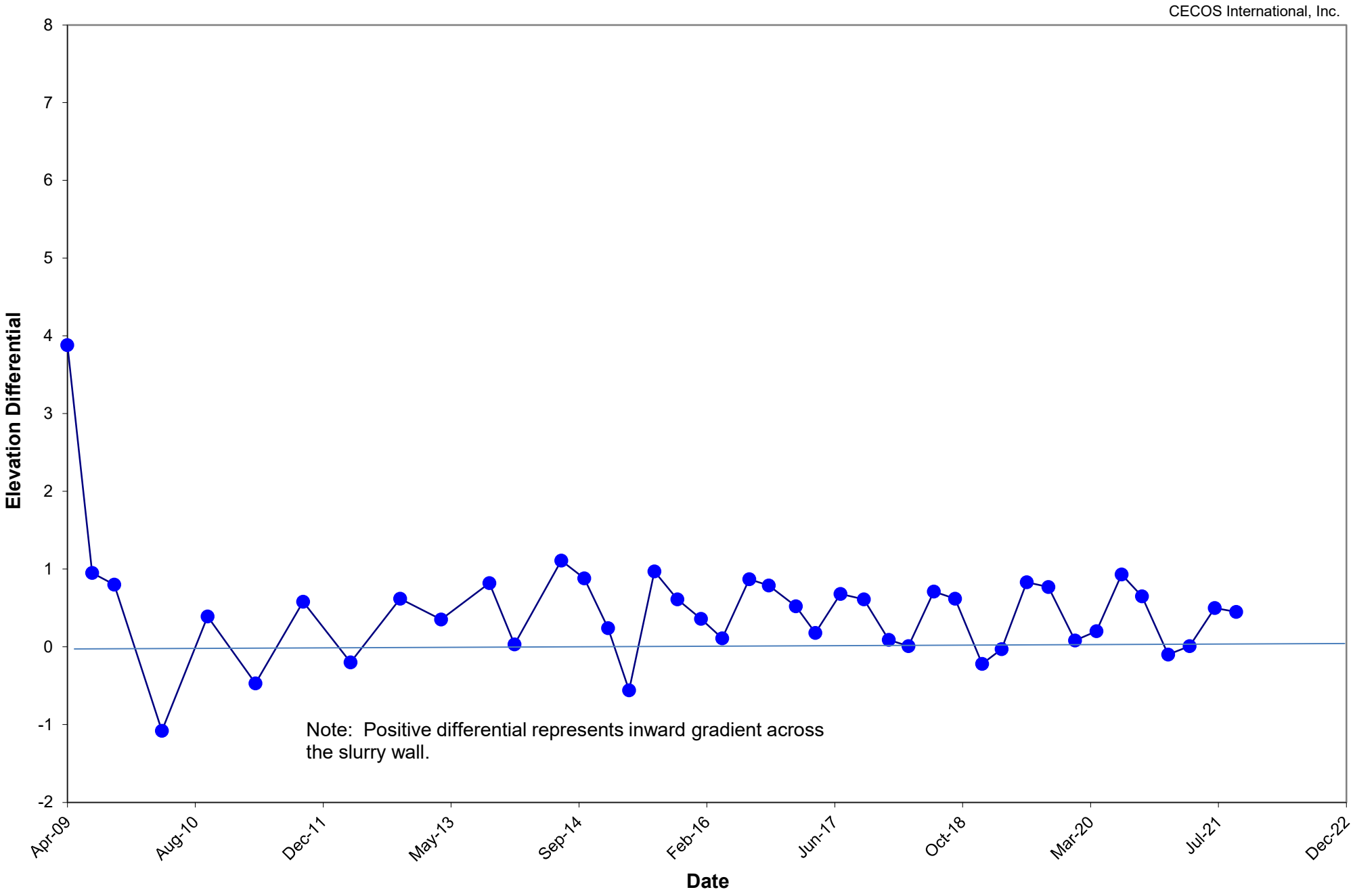

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Figure 5
Elevation Differential for
Well Pair 4: MP-238AR & 880PZ-3

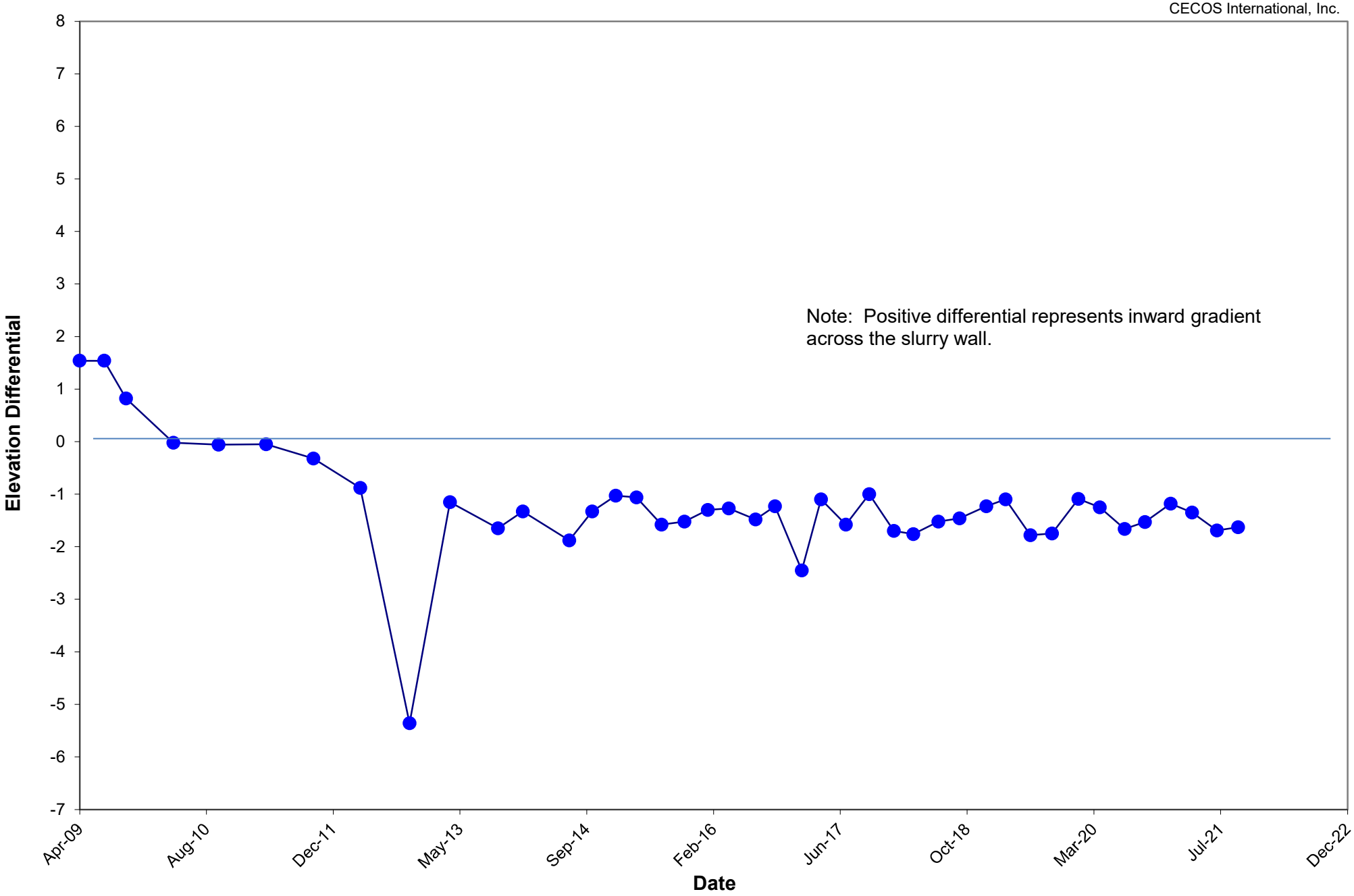

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Figure 6
Elevation Differential for
Well Pair 5: MP-304A & 880PZ-4

CECOS International, Inc.

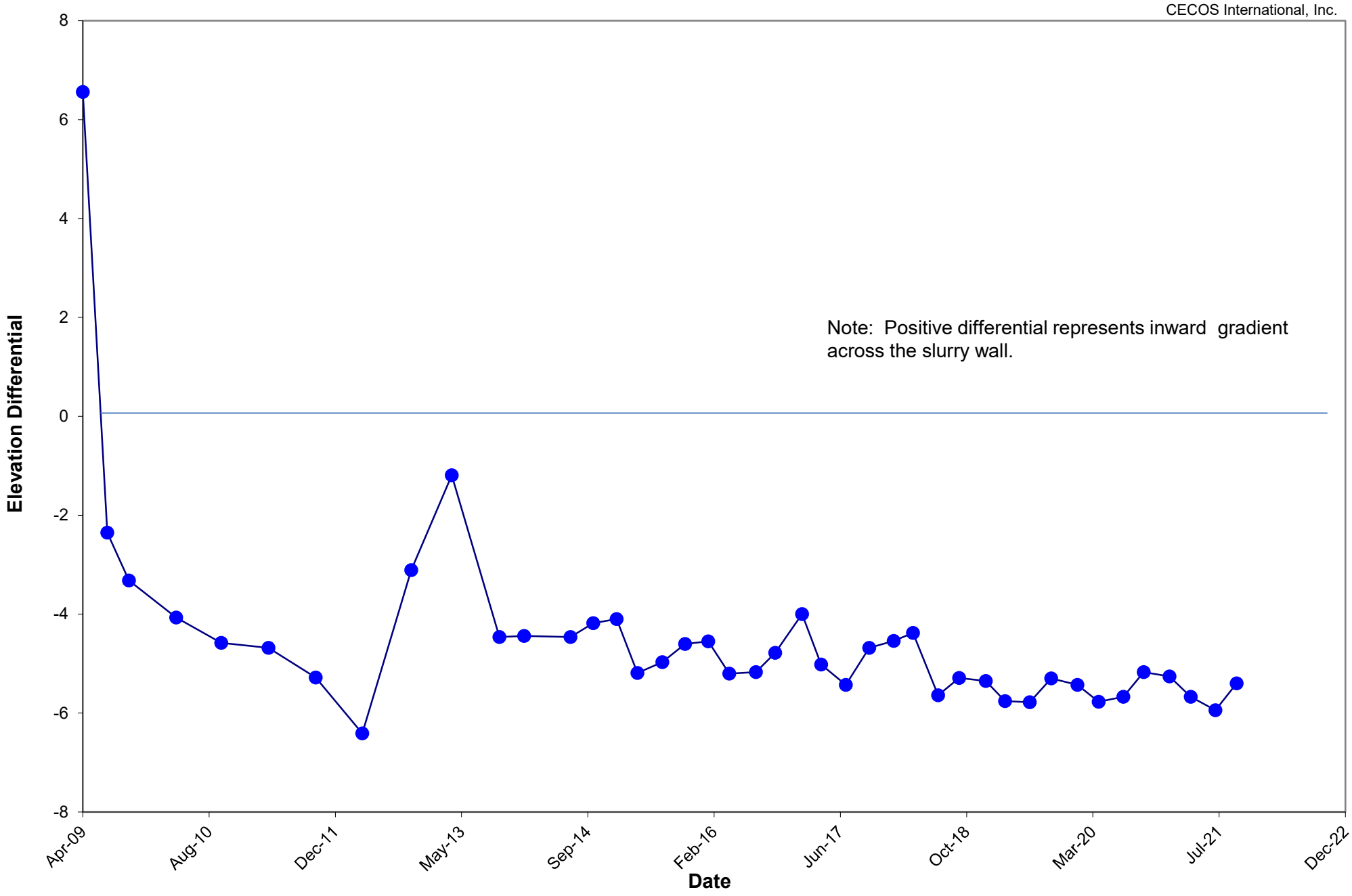

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Figure 7
Elevation Differential for
Well Pair 6: MP-241AR & 880PZ-5

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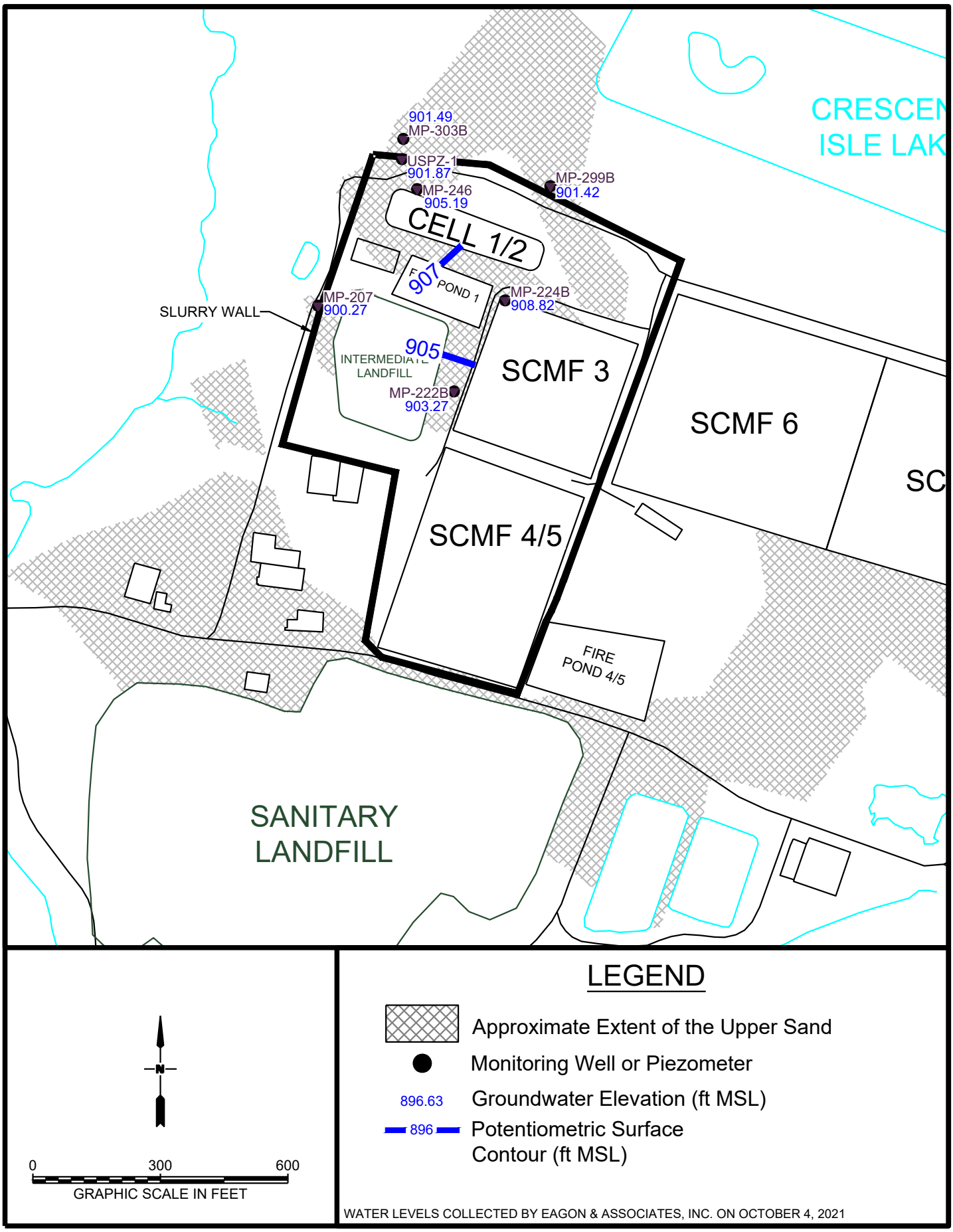

F:\AUTOCADX\CECOS\PSURF\CECOS-FIGURE-10-2021-8.5X11.DWG

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FIGURE 8. POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE - CMI WELLS, OCTOBER 4, 2021

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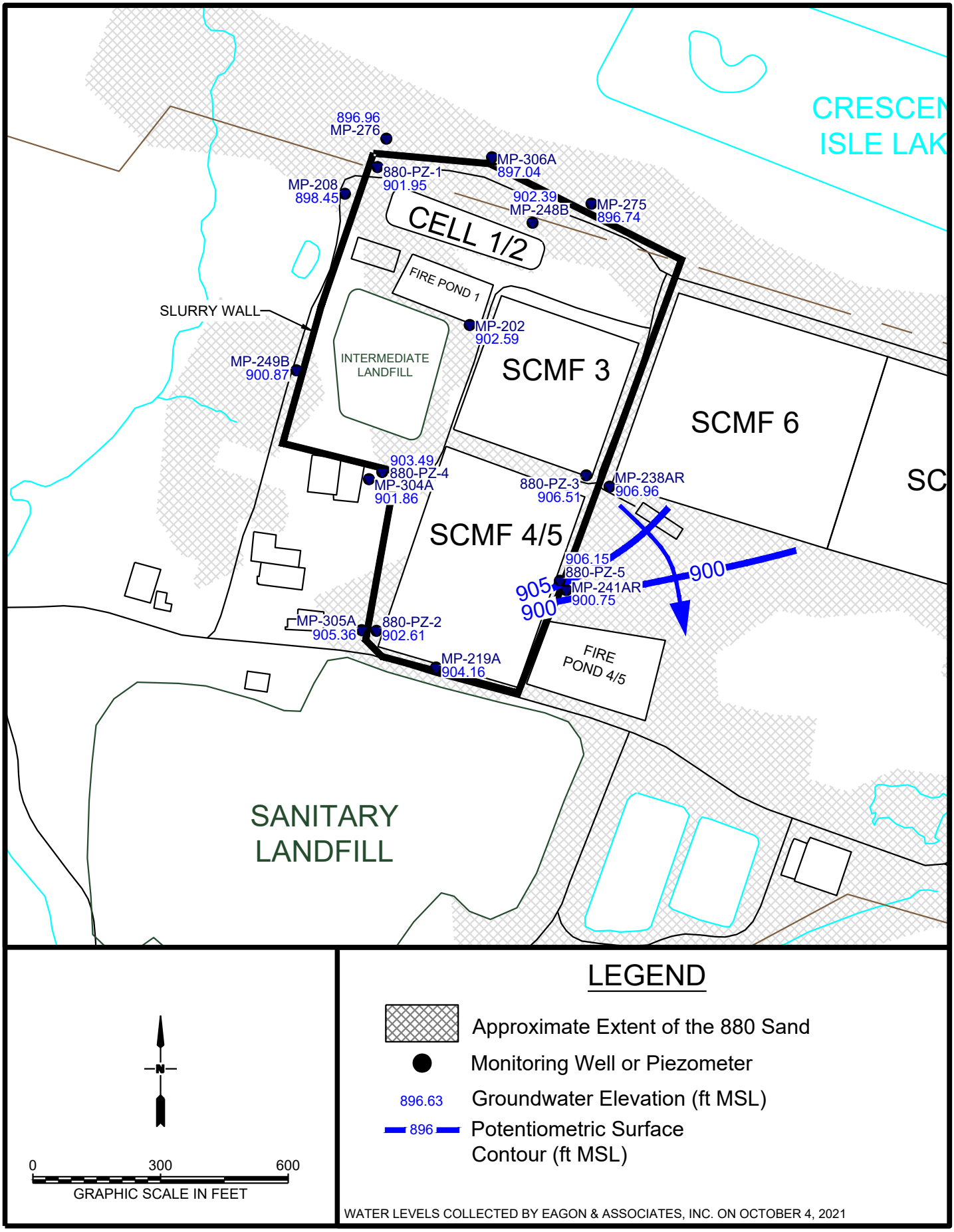

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FIGURE 9. POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE - CMI WELLS, OCTOBER 4, 2021

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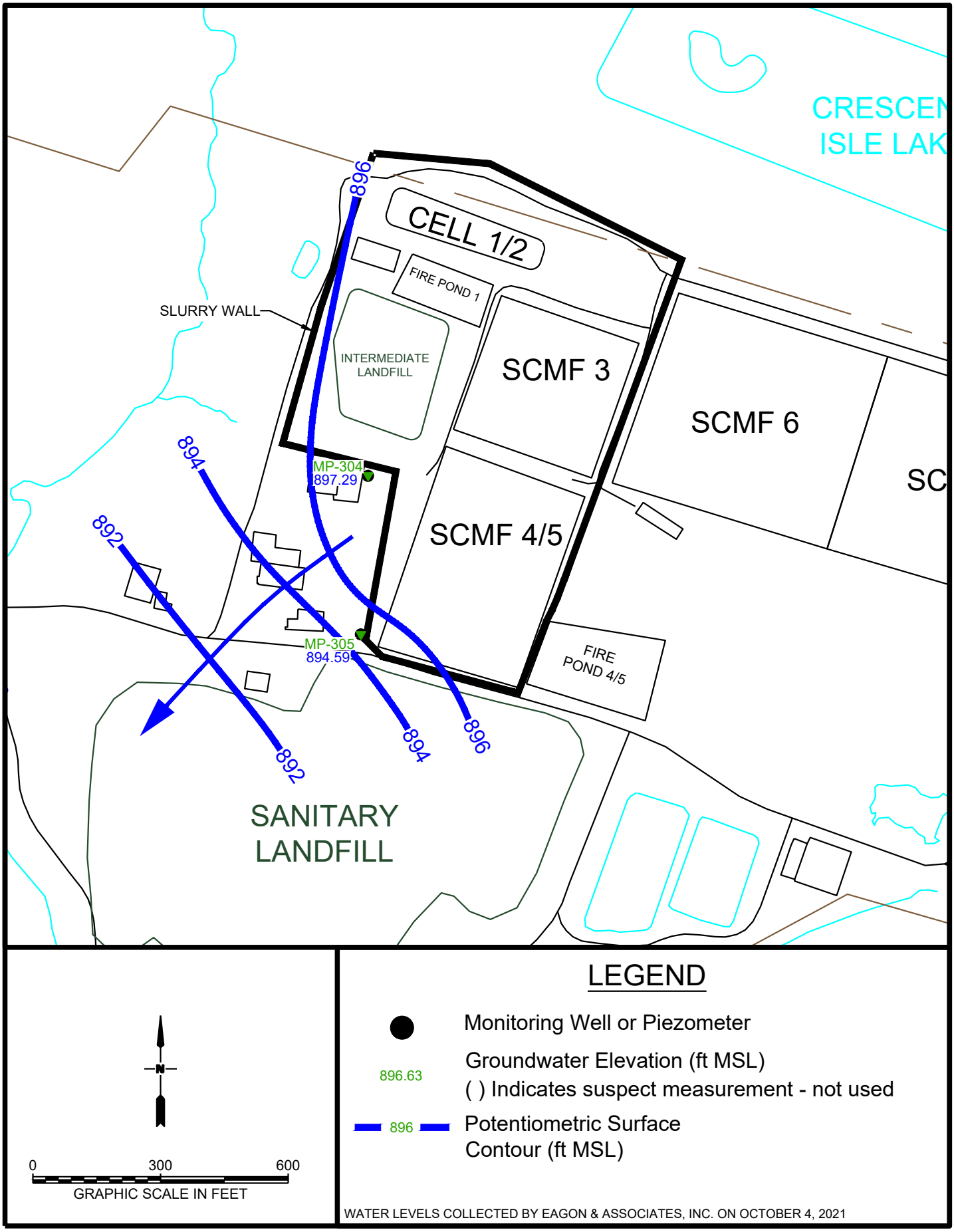


F:\AUTOCADX\CECOS\PSURF\CECOS-FIGURE-10-2021-8.5X11.DWG

Aber Road Facility, Williamsburg, Ohio

FIGURE 10. POTENTIOMETRIC SURFACE OF THE BEDROCK TILL INTERFACE - CMI WELLS, OCTOBER 4, 2021

TABLES

TABLE 1.
SUMMARY OF OCTOBER 2021 CONSTITUENT OF INTEREST (COI) RESULTS AND COMPARISON TO CLEANUP STANDARDS AND ACTION LEVELS [1]
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Well	Sampling Date	Acetone (ug/L)	Benzene (ug/L)	Methyl ethyl ketone (ug/L)	Chloro-ethane (ug/L)	Dichloro-difluoro-methane (ug/L)	1,1-Dichloro-ethane (ug/L)	1,2-Dichloro-ethane (ug/L)	1,1-Dichloro-ethylene (ug/L)	cis-1,2-Dichloro-ethylene (ug/L)	trans-1,2-Dichloro-ethylene (ug/L)	Methylene chloride (ug/L)	Tetra-chloro-ethylene (ug/L)	1,1,1-Trichloro-ethane (ug/L)	Trichloro-ethylene (ug/L)	Trichloro-fluoro-methane (ug/L)	Vinyl chloride (ug/L)
Cleanup Standard (ug/L)[1]		**10000**	**5**	**61000**	**292000**	**20000**	**10000**	**5**	**7**	**70**	**100**	**5**	**5**	**200**	**5**	**31000**	**2**
Basis		**Health**	**MCL**	**Health**	**Health**	**Health**	**Health**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**Health**	**MCL**
Action Level (ug/L)[1]		**4000**	**3**	**1900**	**43000**	**1000**	**2000**	**3**	**4**	**40**	**50**	**3**	**3**	**100**	**3**	**3000**	**1**
Wells Located Outside the Slurry Wall																	
MP-207	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-208	10/4/20201	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-238AR	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-241AR	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-249B	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-275	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-276	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-299B	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-303B	10/5/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304A	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-305	10/4/2021	<10/<10	<2/<2	<10/<10	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2
MP-305A	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-306A	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Wells/Underdrains Located Inside the Slurry Wall																	
MP-202	10/5/2021	<10	<2	<10	<2	<2	**2.4**	1.8 J	<2	1.1 J	<2	<2	<2	<2	<2	<2	<2
MP-219A	10/5/2021	<10/<10	<2/<2	<10/<10	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	0.99 J/ 1.0 J	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2
MP-222B	10/5/2021	<10/<10	**2.5/ 2.3**	<10/<10	1.2 J/ 1.1 J	**5.2/ 5.2**	**3.3/ 3.2**	**27/ 25**	<2/ <2	**2.9/ 2.7**	<2/ <2	<2/ <2	<2/ <2	<2/ <2	<2/ <2	<2/ <2	<2/ <2
MP-224B	10/4/2021	<10	<2	<10	<2	<2	1.2 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-246	10/5/2021	<10	0.84 J	<10	2.5 J	<2	**62**	**16**	**11**	**11**	<2	<2	**87**	**22**	**13**	2.1 J	1.9 J
MP-248B	10/4/2021	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
U-11	10/5/2021	<10	<2	<10	<2	<2	0.59 J	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
U-12	10/5/2021	<10	<2	<10	<2	<2	0.69 J	<2	<2	**11.0**	<2	<2	<2	<2	<2	<2	1.4 J

[1] Cleanup Standards and Action Levels are relevant to Corrective Measures Implementation (CMI) wells located outside the slurry wall.

J: Estimated results between the method detection limit (MDL) and reporting limit

<10/<10: result/duplicate result.

TABLE 2.
CMI COI COMPOUND DETECTIONS AT MP-219A, MP-246 & MP-248B
OCTOBER 2021 MONITORING EVENT
CECOS INTERNATIONAL, INC. ABER ROAD FACILITY

Well	Constituent of Interest (COI)	Result (ug/L)	Concentration-Based Performance Standards (CBPS) (ug/L)	Screening Level (ug/L)
MP-219A	No detections	NA	NA	NA
MP-246	1,1,1-Trichloroethane	22	130,000	1,350
	1,1-Dichloroethylene	11	213	62
	1,2-Dichloroethane	16	37	15
	Tetrachloroethylene	87	60,000,000	30,000,000
	Trichloroethylene	13	1,200	500
	Vinyl Chloride	1.9 J	9	9
MP-248B	No detections	NA	NA	NA

Notes:

Per the July 13, 2009 CMI Operations and Maintenance Manual, results for wells MP-246, MP-219A, and MP-248B are to be compared to calculated CBPS and Screening Levels for six COI compounds (1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride). Results not listed are non-detect (<MDL).

MP-219A and MP-248B had no detections above their respective MDLs for the six target COI compounds

SECTION I
PART B

2021 TSCA Groundwater Monitoring Analytical Results

- **DMP Monitoring Wells**
- **CMI Performance Monitoring Wells**

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

WELLS

April 2021

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-206AR	6.87	3,128	1.2	ND
MP-207	6.51	2,560	1.1	ND
MP-208	6.99	1,512	1.1	ND
MP-210AR	7.2	931	1.3	ND
MP-211BR	6.92	1,140	1.1	ND
MP-213A	6.19	2,877	2.3	ND
MP-214BR	6.87	2,109	1.9	ND
MP-228R	7.41	2,057	ND	ND
MP-228AR	7.17	1,224	1.5	ND
MP-230A	6.99	1,265	1.5	ND
MP-231AR	7.19	3,149	1.1	ND
MP-232A	7.07	1,436	2	ND
MP-233AR	7.12	1,414	1.7	ND
MP-233R	7.47	1,887	5	ND
MP-234AR	7.04	2,752	1.6	ND
MP-234R	7.27	3,424	ND	ND
MP-235BR	7.24	1,931	1.1	ND
MP-235CR	7.15	1,845	1.5	ND
MP-235R	7.39	1,780	ND	ND
MP-237	7.62	1,138	ND	ND
MP-238AR	6.67	1,975	1.2	ND
MP-238R	7.44	963	1	ND
MP-241AR	6.57	2,146	1.6	ND
MP-241R	7.57	816	1	ND
MP-244ARR	7.32	1,043	ND	ND
MP-244R	7.71	1,224	ND	ND
MP-249B	7.24	2,771	1.2	ND
MP-250	7.07	1,080	ND	ND
MP-250A	6.82	1,461	ND	ND
MP-251A	7.3	911	1.3	ND

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-274	7.55	1,073	2.4	ND
MP-274A	6.99	1,388	1.3	ND
MP-275	6.81	1,047	1.7	ND
MP-276	6.68	1,615	3.1	ND
MP-277A	6.89	1,692	1.4	ND
MP-279	6.54	9,371	2.4	ND
MP-280	7.51	1,428	15.1	ND
MP-280A	6.84	1,561	1.4	ND
MP-281	7.2	1,515	2.9	ND
MP-281C	7.05	1,149	1.3	ND
MP-286C	7.47	1,204	1.6	ND
MP-299B	7.31	824	1.4	ND
MP-303B	7.56	886	1	ND
MP-304	6.85	737	2.5	ND
MP-304A	6.81	3,766	1.4	ND
MP-305	6.7	1,177	ND	ND
MP-305A	7.33	606	2.9	ND
MP-306A	7.19	993	12.7	ND
MP-401A	6.85	1,425	2.2	ND
MP-401B	7.05	1,393	1.2	ND
MP-402A	6.82	998	3.9	ND
MP-403A	7.11	1,973	ND	ND
MP-404	7.28	1,642	7.8	ND
MP-404A	7.28	1,112	ND	ND
MP-405A	6.87	2,181	2.1	ND
MP-406C	7.2	1,037	1.2	ND
MP-407	7.32	2,044	2.9	ND
MP-408	7.04	3,715	29.8	ND
MP-409	6.99	983	2.7	ND

Note: ND means not detected above PQL.
The TOC reporting limit was 1 mg/L for the 2021 GW sampling events.
The PCB reporting limit was 0.5 ug/L for the 2021 GW sampling events.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

WELLS

October 2021

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-202	6.7	3,990	5.7	ND
MP-206AR	6.62	3,060	1.5	ND
MP-207	7.13	1,394	1.2	ND
MP-208	7.05	618	1.1	ND
MP-210AR	7.16	988	1.4	ND
MP-211BR	7.04	1,100	1.2	ND
MP-213A	6.64	2,530	2.6	ND
MP-214BR	6.82	2,449	2.1	ND
MP-219A	7.25	811	1.6	ND
MP-222B	6.94	4,260	5.2	ND
MP-224B	6.86	754	1.3	ND
MP-228R	7.4	1,970	1.2	ND
MP-228AR	7.04	1,200	1.7	ND
MP-230A	7.08	1,230	1.5	ND
MP-231AR	7.22	3,167	1.3	ND
MP-232A	7.06	1,395	2.4	ND
MP-233AR	6.97	1,518	2.7	ND
MP-233R	7.38	2,130	6.7	ND
MP-234AR	6.9	2,826	1.7	ND
MP-234R	7.59	3,318	ND	ND
MP-235BR	7.06	1,963	1.2	ND
MP-235CR	6.91	1,903	1.4	ND
MP-235R	7.42	1,868	ND	ND
MP-237	7.71	1,138	ND	ND
MP-238AR	6.79	1,252	1.2	ND
MP-238R	7.5	983	1	ND
MP-241AR	6.74	2,550	1.7	ND
MP-241R	7.76	957	ND	ND
MP-244ARR	7.15	1,255	1.2	ND
MP-244R	7.79	1,322	ND	ND
MP-246	7.11	732	1.8	ND
MP-248B	6.89	1,219	5.4	ND
MP-249B	7.24	1,370	1.7	ND

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-250	7.28	986	ND	ND
MP-250A	7.08	1,409	1	ND
MP-251A	7.62	931	1.4	ND
MP-274	7.54	1,226	2.7	ND
MP-274A	6.99	1,481	1.3	ND
MP-275	6.9	1,165	1.6	ND
MP-276	7.29	968	3.2	ND
MP-277A	7.16	1,430	1.6	ND
MP-279	6.89	7,699	2.5	ND
MP-280	7.54	1,409	15.2	ND
MP-280A	6.9	1,457	1.4	ND
MP-281	7.26	1,465	3.2	ND
MP-281C	7.14	1,234	1.2	ND
MP-286C	7.46	1,100	1.6	ND
MP-299B	7.44	699	1.3	ND
MP-303B	7.5	683	1.3	ND
MP-304	7.5	701	3.8	ND
MP-304A	6.75	2,030	1.6	ND
MP-305	7.1	855	ND	ND
MP-305A	7.07	740	4.3	ND
MP-306A	7.29	1,014	13.5	ND
MP-401A	6.9	1,510	2.3	ND
MP-401B	7.11	1,390	1	ND
MP-402A	6.88	1,112	4.8	ND
MP-403A	6.97	2,196	1.5	ND
MP-404	7.23	1,659	7.7	ND
MP-404A	7.13	1,164	1.2	ND
MP-405A	6.87	1,787	2.4	ND
MP-406C	7.3	970	1.1	ND
MP-407	7.44	1,975	2.9	ND
MP-408	7.1	3,850	29.4	ND
MP-409	7.35	933	2.8	ND

Note: ND means not detected above PQL.

The TOC reporting limit was 1 mg/L for the 2021 GW sampling events.

The PCB reporting limit was 0.5 ug/L for the 2021 GW sampling events.

SECTION I
PART C

2021 TSCA Monitoring Analytical Results

- **Streams**
- **Underdrains**
- **Leak Detectors**
- **Leachate Treatment System Effluent**

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Surface Locations

January 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	5.35	555	7.5	ND
ABER SURFACE LOCATION C-6	6.49	601	7.5	ND
ABER SURFACE LOCATION C-9	6.75	536	7.5	ND
ABER SURFACE LOCATION C-10	7.51	569	7.7	ND
ABER SURFACE LOCATION C-12	6.03	664	4.6	ND

April 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	8.6	500	11.9	ND
ABER SURFACE LOCATION C-6	8.48	525.3	10.3	ND
ABER SURFACE LOCATION C-9	8.66	479.3	11.1	ND
ABER SURFACE LOCATION C-10	8.66	487.8	12	ND
ABER SURFACE LOCATION C-12	8.49	585.7	4.8	ND

July 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	8.38	395	8.4	ND
ABER SURFACE LOCATION C-6	7.22	347.8	7.4	ND
ABER SURFACE LOCATION C-9	8.22	378	8.8	ND
ABER SURFACE LOCATION C-10	8.38	395.4	8.4	ND
ABER SURFACE LOCATION C-12	8.56	319	5.1	ND

October 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	7.98	337	18.5	ND
ABER SURFACE LOCATION C-6	7.74	330	18.4	ND
ABER SURFACE LOCATION C-9	7.96	334	19.5	ND
ABER SURFACE LOCATION C-10	7.91	330	18.4	ND
ABER SURFACE LOCATION C-12	8.12	380	9.3	ND

Notes:
NS means location dry; no sample collected
ND means not detected above PQL.
The TOC reporting limit was 1 mg/L for the 2021 SW sampling events.
The PCB reporting limit was 0.5 ug/L for the 2021 SW sampling events.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

January 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	6.25	1,347	4.1	ND
U-4	6.8	1,343	4	ND
U-5	6.77	1,404	3.5	ND
U-6	6.8	1,425	3.8	ND
U-10	7.51	569	7.7	ND
U-11	6.68	1,199	2.5	ND
U-12	6.75	1,121	2.4	ND
U-13	6.68	1,009	2.5	ND
U-14	6.89	933	2.2	ND
U-15	6.65	2,470	2.3	ND
U-16	6.51	2,330	2.8	ND
U-17	6.88	1,815	1.6	ND
U-18	6.67	1,635	3.1	ND
U-19	8.3	1,350	1.6	ND
U-20	6.72	1,769	1.9	ND
U-21	7.06	1,054	2.6	ND
U-21A	7.04	1,011	3.2	ND
U-22	6.74	1,363	4.4	ND
U-22A	6.63	1,870	5.3	ND
U-23	7.02	962	4.1	ND
U-24	6.48	1,825	5.9	ND
U-25	6.57	1,529	4.1	ND
U-26	6.57	1,771	5.7	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2021.
The PCB reporting limit was 0.5 ug/L in 2021.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

April 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	7.35	1,477	2.3	ND
U-4	7.49	1,285	2.7	ND
U-5	7.38	1,420	2.4	ND
U-6	7.14	1,441	2.5	ND
U-10	7.73	1,015	3.2	ND
U-11	7.32	1,357	1.3	ND
U-12	7.37	1,244	1.4	ND
U-13	7.69	1,081	1.1	ND
U-14	6.97	649	1.5	ND
U-15	7.23	2,350	1.3	ND
U-16	7.07	2,820	1.3	ND
U-17	7.58	1,897	ND	ND
U-18	7.35	1,709	1.8	ND
U-19	6.79	838	1.5	ND
U-20	6.93	1,024	1.1	ND
U-21	7.8	753	1.4	ND
U-21A	7.54	729	1.6	ND
U-22	7.4	1,226	3.3	ND
U-22A	8.01	1,285	3.5	ND
U-23	7.58	698	2.4	ND
U-24	7.12	1,234	3.8	ND
U-25	6.73	1,045	2.9	ND
U-26	7.14	1,153	5.1	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2021.
The PCB reporting limit was 0.5 ug/L in 2021.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

July 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	7.38	792	1.7	ND
U-4	7.54	805	2.4	ND
U-5	7.33	762	2.2	ND
U-6	7.34	765	2.1	ND
U-10	7.78	531	5.3	ND
U-11	7.47	815	ND	ND
U-12	7.29	772	ND	ND
U-13	7.74	703	ND	ND
U-14	7.61	670	ND	ND
U-15	7.72	1,062	ND	ND
U-16	7.18	1,232	1.1	ND
U-17	7.5	1,003	ND	ND
U-18	7.26	1,136	1.4	ND
U-19	7.61	765	ND	ND
U-20	7.6	946	ND	ND
U-21	7.45	808	ND	ND
U-21A	6.81	761	ND	ND
U-22	7.38	1,239	2.7	ND
U-22A	7	1,213	3.2	ND
U-23	7.61	760	2.2	ND
U-24	6.65	1,313	3.8	ND
U-25	7.4	1,100	2.2	ND
U-26	7.22	1,190	4.4	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2021.
The PCB reporting limit was 0.5 ug/L in 2021.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

October 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	7.11	1,283	3	ND
U-4	7.17	1,415	3.8	ND
U-5	7.14	1,460	4.2	ND
U-6	7.07	1,532	3.6	ND
U-10	7.3	1,004	5.3	ND
U-11	6.99	1,405	2.1	ND
U-12	6.99	1,266	2.2	ND
U-13	7.23	1,238	2	ND
U-14	7.2	1,074	1.6	ND
U-15	6.95	2,590	2.2	ND
U-16	6.92	2,750	2.2	ND
U-17	7.03	2,370	1.7	ND
U-18	7	1,909	3	ND
U-19	7.26	1,372	2	ND
U-20	7.16	1,812	1.9	ND
U-21	7.19	1,309	2.3	ND
U-21A	7.09	966	4.1	ND
U-22	7.65	2,380	4.2	ND
U-22A	6.61	2,290	4.9	ND
U-23	7.18	990	5.1	ND
U-24	7.47	2,230	5.2	ND
U-25	6.76	1,810	3.7	ND
U-26	6.8	2,180	6.1	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2021.
The PCB reporting limit was 0.5 ug/L in 2021.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Leak Detectors

January 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.08	2,250	18.1	ND
ABER LEAK DETECTION LD-2	6.33	1,875	13.1	ND
ABER LEAK DETECTION LD-3	6.6	1,738	4.3	ND
ABER LEAK DETECTION LD-4	6.57	1,682	4.3	ND

April 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.82	1,366	17.2	ND
ABER LEAK DETECTION LD-2	6.8	1,212	11.3	ND
ABER LEAK DETECTION LD-3	6.4	1,067	3.7	ND
ABER LEAK DETECTION LD-4	6.58	1,036	3.4	ND

July 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.8	1,433	12.8	ND
ABER LEAK DETECTION LD-2	6.7	1,356	9.5	ND
ABER LEAK DETECTION LD-3	7.11	--	2.1	ND
ABER LEAK DETECTION LD-4	7.33	1,031	1.8	ND

October 2021

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	7.38	2,910	16.8	ND
ABER LEAK DETECTION LD-2	7.17	2,580	11	ND
ABER LEAK DETECTION LD-3	6.88	2,170	3.7	ND
ABER LEAK DETECTION LD-4	6.62	2,020	3.9	ND

Note: ND means not detected.
The TOC reporting was 1 mg/L in 2021.
The PCB reporting limit was 0.5 ug/L in 2021.

2021 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

CECOS, ABER ROAD LEACHATE TREATMENT SYSTEM EFFLUENT RESULTS
June 28, 2021

Parameter	Units	Result
Aroclor-1016	ug/L	<5000
Aroclor-1221	ug/L	<5000
Aroclor-1232	ug/L	<5000
Aroclor-1242	ug/L	<5000
Aroclor-1248	ug/L	<5000
Aroclor-1254	ug/L	<5000
Aroclor-1260	ug/L	<5000
TOC	mg/L	1,380
pH	S.U.	8.16
Specific Conductance	µmhos/cm	15,280

SECTION II
LEACHATE VOLUMES PRODUCED AT EACH TSCA SUBCELL

Leachate from TSCA Subcells
CECOS, Aber Road Facility
January - December 2021

Standpipe Location	SCMF Number	Gallons Produced In 2021
L-4	3	2,918
L-5	3	10,482
L-6	4&5	3,546
L-7	4&5	8,693
L-10	6	16,550
L-11	6	5,650
L-14	6	1,782
L-15	7	8,068
L-16	7	9,773
L-17	7	16,178
L-18	7	15,502
L-20	8	14,067
L-21/22	8	11,768
L-26	9	4,232
L-27	9	6,572
L-35	10	90,249
L-36	10	39,172
	2021 TOTAL	**265,201**

SECTION III

POTENTIOMETRIC SURFACE DATA and MAPS

April 2021 Water Level Data

TABLES

TABLE 1A.
MEASURED WATER LEVELS IN THE UPPER SAND ZONE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-203A	PZ	928.74	11:59	18.70	910.04	
MP-203C	PZ	927.60	11:32	17.50	910.10	
MP-205C	PZ	915.36	9:15	8.37	906.99	
MP-205D	PZ	915.73	9:12	4.97	910.76	
MP-206AR	MW	916.73	9:30	7.61	909.12	
MP-207	MW	906.54	9:04	5.98	900.56	
MP-212A	PZ	913.30	10:03	5.06	908.24	
MP-215A	MW	909.11	9:04	13.92	895.19	
MP-220AR	PZ	910.10	10:44	5.15	904.95	
MP-222B	MW	910.09	10:08	6.20	903.89	
MP-224B	MW	913.83	10:04	4.43	909.40	
MP-231AR	MW	915.73	9:05	9.74	905.99	
MP-235AR	PZ	913.53	10:11	6.15	907.38	
MP-235CR	MW	914.66	10:13	12.08	902.58	
MP-239B	MW	915.58	11:01	7.61	907.97	
MP-244ARR	MW	909.82	11:30	14.08	895.74	
MP-246	MW	908.59	9:09	3.05	905.54	
MP-253A	PZ	900.34	9:11	7.76	892.58	
MP-255A	PZ	910.82	10:20	4.04	906.78	
MP-268	PZ	910.12	10:10	6.80	903.32	
MP-277B	PZ	915.56	9:20	3.68	911.88	
MP-284B	PZ	913.31	10:46	1.94	911.37	
MP-285B	PZ	915.27	10:34	4.86	910.41	
MP-290B	MW	898.71	9:14	6.40	892.31	
MP-299B	PZ	911.62	11:27	5.00	906.62	
MP-301B	PZ	907.90	9:28	4.96	902.94	
MP-303B	MW	906.24	9:22	4.45	901.79	
MP-401A	MW	906.37	11:14	10.56	895.81	
MP-402A	MW	908.42	10:01	5.48	902.94	
MP-403A	MW	912.37	9:18	7.63	904.74	
MP-404A	MW	915.09	10:42	10.43	904.66	
MP-405A	MW	911.02	10:18	4.35	906.67	
P-505A	PZ	915.97	10:10	7.82	908.15	
USPZ-1	PZ	908.00	9:24	4.48	903.52	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
880-PZ1	PZ	908.49	9:17	5.48	903.01	
880-PZ2	PZ	907.11	10:43	3.90	903.21	
880-PZ3	PZ	915.45	11:09	10.08	905.37	
880-PZ4	PZ	909.45	10:34	6.08	903.37	
880-PZ5	PZ	914.42	11:15	9.06	905.36	
M-06	PZ	932.75	11:31	8.51	924.24	
M-25	PZ	913.32	10:37	8.90	904.42	
MP-200R	PZ	913.79	11:05	14.93	898.86	
MP-201	PZ	909.86	10:24	5.40	904.46	
MP-202	MW	911.89	9:56	8.16	903.73	
MP-203R	PZ	927.77	11:30	17.63	910.14	
MP-204A	PZ	917.16	11:24	7.03	910.13	
MP-205BR	PZ	914.62	9:10	5.92	908.70	
MP-206	PZ	915.99	9:32	6.68	909.31	
MP-206CR	PZ	915.31	9:34	6.06	909.25	
MP-208	MW	907.57	9:12	7.72	899.85	
MP-210AR	MW	912.83	9:39	4.20	908.63	
MP-211BR	MW	911.09	9:56	6.94	904.15	
MP-212D	PZ	912.48	10:05	4.19	908.29	
MP-213A	MW	912.98	10:15	18.04	894.94	
MP-214BR	MW	910.29	9:16	14.99	895.30	
MP-216BR	MW	911.36	8:55	14.30	897.06	
MP-217A	PZ	914.14	9:42	17.21	896.93	
MP-217B	PZ	914.24	9:42	17.41	896.83	
MP-219A	MW	912.34	10:56	7.48	904.86	
MP-223AR	PZ	910.63	9:59	7.12	903.51	
MP-227AR	PZ	912.12	10:56	14.66	897.46	
MP-228AR	MW	911.64	10:53	14.33	897.31	
MP-228B	PZ	911.34	10:52	14.04	897.30	
MP-229B	PZ	910.63	10:37	13.34	897.29	
MP-230A	MW	908.75	10:33	13.08	895.67	
MP-232A	MW	909.75	10:30	14.51	895.24	
MP-233AR	MW	907.44	9:53	6.14	901.30	
MP-234AR	MW	910.90	10:20	8.42	902.48	
MP-235BR	MW	914.50	10:15	15.34	899.16	
MP-238AR	MW	916.36	11:04	10.98	905.38	
MP-241AR	MW	916.39	11:13	16.70	899.69	
MP-247A	PZ	908.47	11:18	14.52	893.95	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-248B	MW	909.77	9:39	6.33	903.44	
MP-249B	MW	903.68	9:00	2.72	900.96	
MP-250A	MW	910.24	11:22	11.00	899.24	
MP-251A	MW	911.54	9:42	2.92	908.62	
MP-252A	MW	894.88	9:29	2.10	892.78	
MP-261A	PZ	912.36	11:31	13.71	898.65	
MP-264	PZ	909.85	10:53	4.27	905.58	
MP-266A	PZ	899.54	9:00	14.14	885.40	
MP-269A	PZ	912.62	9:41	17.88	894.74	
MP-270A	PZ	911.54	9:31	16.70	894.84	
MP-271A	PZ	914.14	10:02	5.81	908.33	
MP-272A	PZ	913.37	10:43	0.45	912.92	
MP-273ARR	PZ	932.26	11:45	35.44	896.82	
MP-274A	MW	912.78	10:50	17.37	895.41	
MP-275	MW	911.89	9:44	14.43	897.46	
MP-276	MW	906.81	9:19	9.20	897.61	
MP-277A	MW	915.24	9:24	6.33	908.91	
MP-278A	PZ	919.23	11:37	9.33	909.90	
MP-280A	MW	912.28	10:21	17.33	894.95	
MP-281A	PZ	913.69	11:01	18.34	895.35	
MP-285A	PZ	916.14	10:32	5.89	910.25	
MP-289A	PZ	913.33	9:47	9.90	903.43	
MP-290A	PZ	899.09	9:16	5.56	893.53	
MP-294A	PZ	905.35	8:50	7.75	897.60	
MP-296A	PZ	902.90	8:53	4.96	897.94	
MP-300A	PZ	907.33	9:14	7.64	899.69	
MP-304A	MW	908.42	10:32	6.40	902.02	
MP-305A	MW	908.11	10:50	3.56	904.55	
MP-306A	MW	911.34	9:31	13.50	897.84	
MP-401B	MW	906.56	11:14	7.54	899.02	
P-500B	PZ	914.82	11:18	3.99	910.83	
P-501A	PZ	913.93	10:29	4.06	909.87	
P-511A	PZ	913.52	9:43	18.81	894.71	
P-515A	PZ	913.01	10:25	--	--	Blocked
P-517	PZ	912.34	10:39	2.13	910.21	
P-520	PZ	914.77	11:02	4.89	909.88	
P-527	PZ	894.90	9:25	2.94	891.96	
P-528	PZ	900.31	9:22	6.21	894.10	
P-529	PZ	902.51	9:20	3.32	899.19	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1C.
MEASURED WATER LEVELS IN THE CHANNEL SAND ZONE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3A	PZ	911.99	9:09	15.03	896.96	
13-12	PZ	913.13	9:25	17.53	895.60	
MP-215BR	MW	909.99	9:05	14.50	895.49	
MP-231BR	PZ	917.95	9:02	22.23	895.72	
MP-242AR	PZ	909.42	11:39	12.51	896.91	
MP-281C	MW	914.12	10:55	18.60	895.52	
MP-282C	PZ	911.37	9:10	15.90	895.47	
MP-283C	PZ	915.34	8:59	19.86	895.48	
MP-286C	MW	914.59	11:15	16.65	897.94	
MP-406C	MW	917.40	11:10	21.51	895.89	
P-500A	PZ	915.99	11:19	19.82	896.17	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3	PZ	910.04	9:10	14.77	895.27	
12-4	PZ	911.99	9:09	15.03	896.96	
12-5	PZ	910.04	11:59	12.90	897.14	
12-6	PZ	914.67	11:45	19.19	895.48	
13-5	PZ	914.92	9:00	19.19	895.73	
14-1	PZ	917.02	11:05	21.55	895.47	
14-3	PZ	908.12	9:43	12.27	895.85	
14-4	PZ	911.16	9:47	15.42	895.74	
14-5	PZ	910.09	10:25	13.76	896.33	
14-7	PZ	917.05	11:16	21.76	895.29	
MP-209	PZ	923.14	11:28	20.94	902.20	
MP-214R	PZ	910.86	9:17	14.99	895.87	
MP-217R	PZ	912.91	9:40	15.83	897.08	
MP-221R	PZ	910.54	10:39	10.55	899.99	
MP-222R	PZ	911.89	10:12	11.32	900.57	
MP-223R	PZ	910.05	10:00	12.17	897.88	
MP-226	PZ	913.85	10:59	15.76	898.09	
MP-227R	MW	913.00	13:12	15.52	897.48	
MP-228R	PZ	911.41	10:50	13.06	898.35	
MP-230R	PZ	908.28	10:33	13.08	895.20	
MP-231R	PZ	916.06	9:00	20.57	895.49	
MP-233R	MW	907.00	9:51	10.76	896.24	
MP-234R	MW	911.88	10:18	13.41	898.47	
MP-235R	MW	914.84	10:10	16.94	897.90	
MP-237	MW	913.68	10:05	15.58	898.10	
MP-238R	MW	915.31	11:06	17.11	898.20	
MP-240R	PZ	923.97	10:15	22.52	901.45	
MP-240R1	PZ	922.46	10:17	21.62	900.84	
MP-241R	MW	913.57	11:13	16.70	896.87	
MP-242	PZ	908.37	11:40	< 0.00	> 908.37	Flowing
MP-243	PZ	883.37	9:05	0.04	883.33	
MP-244R	MW	909.73	11:26	11.48	898.25	
MP-248	PZ	909.81	9:37	11.77	898.04	
MP-249	PZ	904.29	8:59	8.18	896.11	
MP-250	MW	910.07	11:20	11.82	898.25	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-251	PZ	910.99	9:45	9.03	901.96	
MP-252	MW	894.59	9:27	< 0.00	> 894.59	Flowing
MP-253	PZ	901.36	9:10	7.25	894.11	
MP-254	PZ	886.47	9:07	0.68	885.79	
MP-255	PZ	909.81	10:22	11.80	898.01	
MP-256	PZ	909.57	10:25	20.12	889.45	
MP-259	PZ	904.17	9:06	7.18	896.99	
MP-260	PZ	911.12	10:02	17.10	894.02	
MP-265	PZ	886.34	10:53	4.27	882.07	
MP-266	PZ	899.14	9:00	14.14	885.00	
MP-267	PZ	891.68	9:03	6.64	885.04	
MP-269	PZ	912.79	9:40	19.91	892.88	
MP-270	MW	911.94	9:32	16.02	895.92	
MP-271	PZ	914.70	10:03	14.40	900.30	
MP-272	PZ	912.79	10:44	7.95	904.84	
MP-273B	PZ	932.17	11:42	36.71	895.46	
MP-274	MW	912.20	10:47	16.61	895.59	
MP-279	MW	910.36	10:10	9.63	900.73	
MP-280	MW	912.49	10:28	14.05	898.44	
MP-281	MW	913.53	10:58	18.06	895.47	
MP-284	PZ	913.43	10:48	6.85	906.58	
MP-285	PZ	915.37	10:33	11.86	903.51	
MP-287	PZ	889.18	8:52	1.06	888.12	
MP-290	PZ	898.20	9:18	0.26	897.94	
MP-294	PZ	906.14	8:48	11.28	894.86	
MP-296	PZ	902.87	8:54	8.65	894.22	
MP-304	MW	908.36	10:30	10.18	898.18	
MP-305	MW	907.74	10:47	13.50	894.24	
MP-404	MW	912.75	10:38	15.76	896.99	
MP-407	MW	910.31	10:27	14.42	895.89	
MP-408	MW	916.41	11:19	21.62	894.79	
MP-409	MW	911.83	9:49	9.60	902.23	
P-500	PZ	914.68	11:17	11.00	903.68	
P-501	PZ	914.30	10:28	10.31	903.99	
P-503	PZ	916.15	10:53	12.35	903.80	
P-504	PZ	915.71	10:57	17.76	897.95	
P-505	PZ	916.40	10:09	16.98	899.42	
P-506	PZ	916.06	10:16	12.23	903.83	
P-508	PZ	913.19	9:59	20.86	892.33	

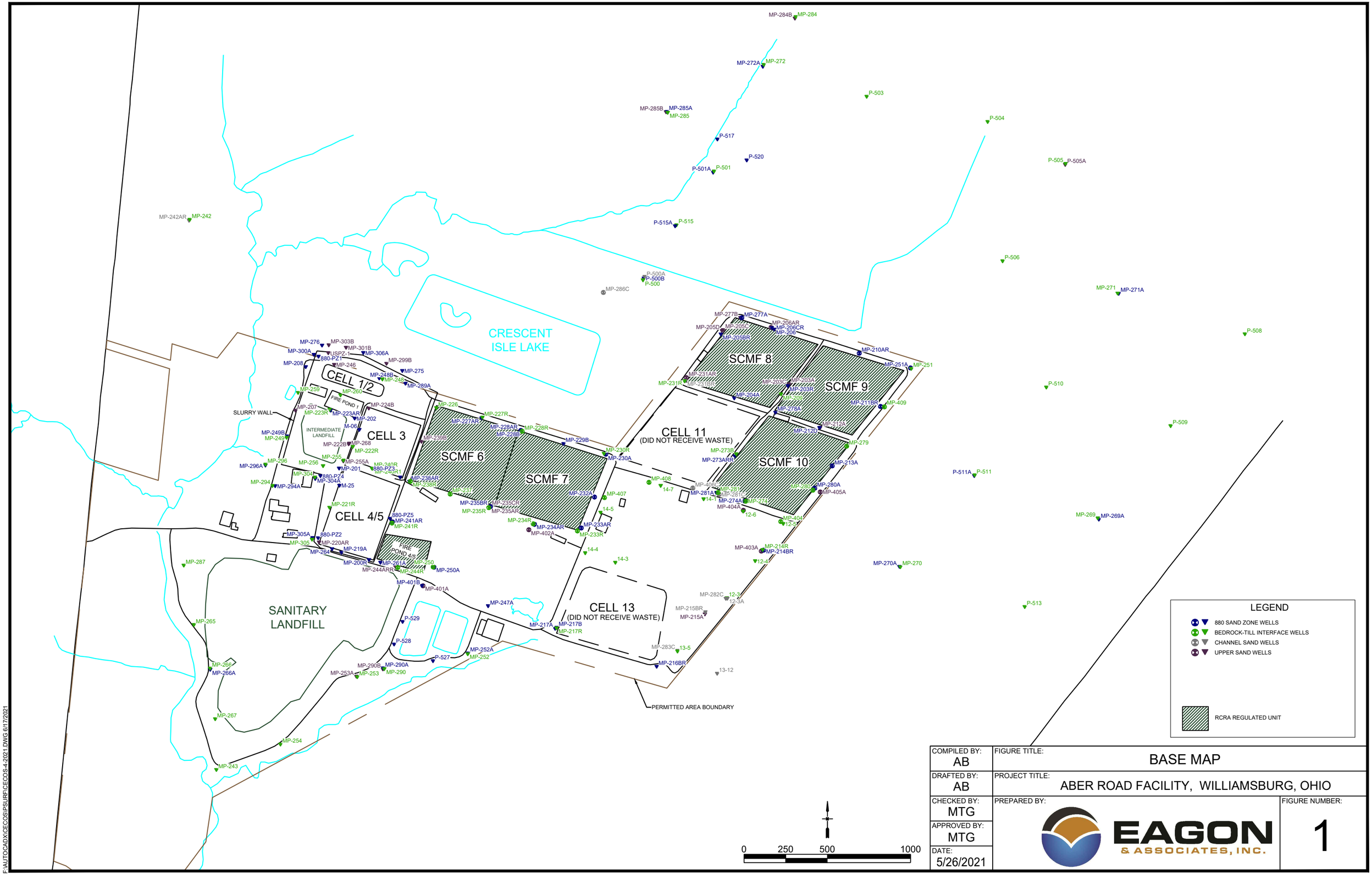
Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 5, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
P-509	PZ	909.97	9:54	14.54	895.43	
P-510	PZ	914.17	9:50	17.91	896.26	
P-511	PZ	913.22	9:43	15.02	898.20	
P-513	PZ	912.76	9:36	15.02	897.74	
P-515	PZ	913.13	10:25	9.20	903.93	

Note: PZ = piezometer; MW = monitoring well.

FIGURES



COMPILED BY: AB	FIGURE TITLE: BASE MAP
DRAFTED BY: AB	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 1
DATE: 5/26/2021	

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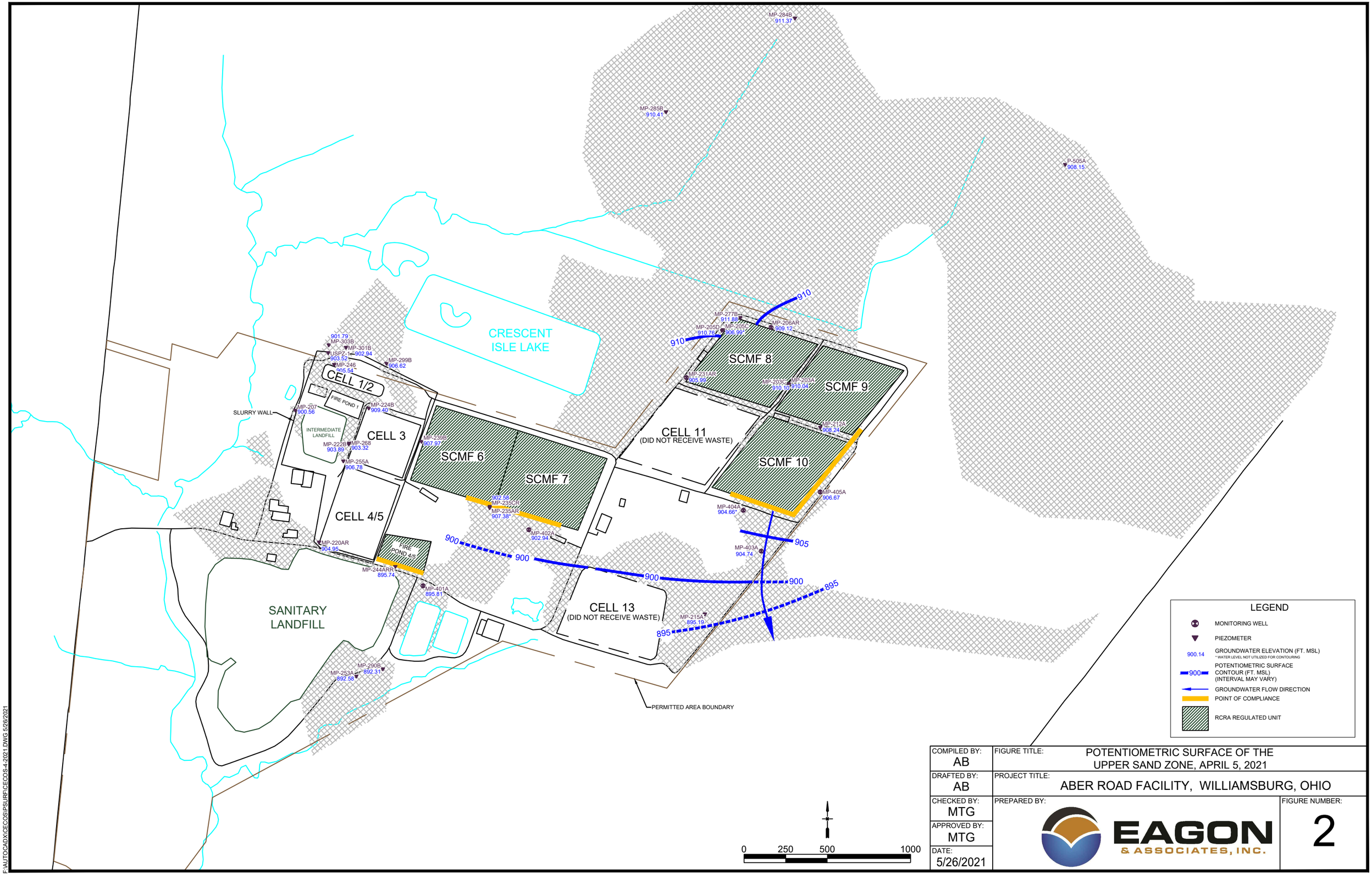

COMPILED BY: AB	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE, APRIL 5, 2021
DRAFTED BY: AB	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 2
DATE: 5/26/2021	

F:\AUTOCADX\CECOS\PSURF\CECOS-4-2021.DWG 5/26/2021

CRESCENT ISLE LAKE

CELL 1/2

FIRE POND 1

SLURRY WALL

CELL 3

INTERMEDIATE LANDFILL

CELL 4/5

FIRE POND 4/5

SANITARY LANDFILL

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

PERMITTED AREA BOUNDARY

MP-272A 912.92
MP-285A 910.25
P-517 910.21
P-520 909.88
P-501A 909.87
P-515A**
P-500B 910.83
MP-271A 908.33
MP-277A 908.91
909.25
MP-206CR
MP-206* 909.31
MP-205BR 908.70
MP-210AR 908.63
MP-251A 908.62
MP-204A 910.13
MP-203R 910.14*
MP-211BR 904.15*
MP-278A 909.90
MP-212D 908.20
MP-213A 894.94
MP-273ARR 896.82
MP-280A 894.95
MP-281A 895.35
MP-274A 895.41
P-511A 894.71
MP-269A 894.74
MP-214BR 895.30
MP-270A 894.84
MP-216BR 897.06
897.61 MP-276
MP-300A 899.66
MP-208 899.85
880-PZ1 903.01
MP-306A 897.84
903.44 MP-248B
MP-275 897.46
MP-289A 903.43
MP-223AR 903.51
MP-202 903.73
M-06* 924.24'
MP-249B 900.96
MP-296A 897.94
MP-294A 897.60
903.37 880-PZ4
MP-304A 902.02
904.46 MP-201
M-25 904.42
880-PZ3 905.37
MP-238AR 905.38
905.36 880-PZ5
MP-241AR 899.69
MP-305A 904.55
880-PZ2 903.21
MP-264 905.58
MP-219A 904.86
MP-200R 898.86
MP-261A 898.65
MP-250A 899.24
MP-401B 899.02
897.46 MP-227AR
897.31 MP-228AR
MP-228B 897.30
MP-229B 897.29
895.67 MP-230A
MP-235BR 899.16
MP-234AR 902.48
MP-233AR 901.30
MP-232A 895.24
MP-247A 893.95
MP-217A 896.93
MP-217B 896.83
P-529 899.19
P-528 894.10
P-527 891.96
MP-252A 892.78
MP-290A 893.53
MP-266A 885.40
905
910
912
900
895
893

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL)
  * WATER LEVEL NOT UTILIZED FOR CONTOURING
  ** WATER LEVEL MEASUREMENT BLOCKED
- POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: AB	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE, APRIL 5, 2021
DRAFTED BY: AB	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 3
DATE: 5/26/2021	

F:\AUTOCADX\CECOS\PSU\RFI\CECOS-4-2021.DWG 5/26/2021

CRESCENT ISLE LAKE

CELL 1/2

FIRE POND 1

SLURRY WALL

INTERMEDIATE LANDFILL

CELL 3

CELL 4/5

FIRE POND 4/5

SANITARY LANDFILL

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

PERMITTED AREA BOUNDARY

MP-242AR
896.91

P-500A
896.17

MP-286C
897.94*

MP-231BR
895.72

MP-406C
895.89

MP-281C
895.52

MP-282C
895.47

12-3A
896.96*

MP-215BR
895.49

MP-283C
895.48

13-12
895.60*

896.5

896.5

896

896

895.5

895.5

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 — GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 — POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: AB	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE CHANNEL SAND ZONE, APRIL 5, 2021	
DRAFTED BY: AB	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 4
APPROVED BY: MTG		
DATE: 5/6/2021		

F:\AUTOCADX\CECOS\PSU\RFI\CECOS-4-2021.DWG 5/6/2021

CRESCENT ISLE LAKE

CELL 1/2

CELL 3

CELL 4/5

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11 (DID NOT RECEIVE WASTE)

CELL 13 (DID NOT RECEIVE WASTE)

SANITARY LANDFILL

SLURRY WALL

INTERMEDIATE LANDFILL

FIRE POND 1

FIRE POND 4/5

PERMITTED AREA BOUNDARY

MP-284 906.58
MP-272 904.84
P-503 903.80
MP-285 903.51
P-504 897.95
899.42 P-505
P-501 903.99
MP-242 >908.37
P-515 903.93
P-506 903.83
P-500 903.68
MP-271 900.30
P-508 892.33
MP-251 901.96
MP-231R 895.49
MP-205 902.20
MP-109 902.23
P-510 896.26
MP-279 900.73
P-509 895.43
MP-259 896.99
MP-260 894.02
MP-248 898.04
MP-226 898.09
MP-227R 897.48*
MP-223R 897.88
MP-228R 898.35*
MP-249 896.11
MP-222R 900.57
MP-230R 895.20
MP-273R 895.45
P-511 898.20
MP-296 894.22
MP-256 901.45
MP-240R 900.84
MP-240R1 900.84
MP-304 898.18
MP-238R1 898.20
MP-231 898.10
MP-407 895.89
MP-408 894.79*
14-7 895.29
MP-281 895.47
MP-282 898.44
MP-294 894.86
MP-221R 899.99
MP-235R 897.90
MP-234R 898.47
14-5 896.33
14-1 895.47
MP-274 895.59
12-6 895.48
MP-404 896.99
12-5 897.14
MP-269 892.88
MP-241R 896.87
MP-233R 896.24
MP-214R 895.87
MP-305 894.24
MP-244R 898.25
MP-250 898.25
14-4 895.74
14-3 895.85
12-4 895.01
MP-270 895.92
MP-287 888.12
12-3 895.27
MP-217R 897.11
13-5 895.73
MP-265 882.07
MP-268 885.00
MP-253 894.11
MP-290 897.94
MP-252 >894.59
MP-267 885.04
MP-254 885.79
MP-243 883.33
P-513 897.74

889.45* MP-255

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: AB	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE BEDROCK-TILL INTERFACE, APRIL 5, 2021
DRAFTED BY: AB	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 5
DATE: 5/26/2021	

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October 2021 Water Level Data

TABLES

TABLE 1A.
MEASURED WATER LEVELS IN THE UPPER SAND ZONE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-203A	PZ	928.74	11:03	18.60	910.14	
MP-203C	PZ	927.60	11:04	17.41	910.19	
MP-205C	PZ	915.36	9:01	8.20	907.16	
MP-205D	PZ	915.73	9:03	7.04	908.69	
MP-206AR	MW	916.73	9:31	10.28	906.45	
MP-207	MW	906.54	9:08	6.27	900.27	
MP-212A	PZ	913.30	11:17	5.28	908.02	
MP-215A	MW	909.11	9:16	14.70	894.41	
MP-220AR	PZ	910.10	11:36	5.44	904.66	
MP-222B	MW	910.09	11:00	6.82	903.27	
MP-224B	MW	913.83	10:31	5.01	908.82	
MP-231AR	MW	915.73	8:55	8.81	906.92	
MP-235AR	PZ	913.53	10:24	6.98	906.55	
MP-235CR	MW	914.66	10:27	11.20	903.46	
MP-239B	MW	915.58	11:26	7.81	907.77	
MP-244ARR	MW	909.82	11:48	14.22	895.60	
MP-246	MW	908.59	9:37	3.40	905.19	
MP-253A	PZ	900.34	9:07	9.07	891.27	
MP-255A	PZ	910.82	11:04	4.45	906.37	
MP-268	PZ	910.12	10:58	7.15	902.97	
MP-277B	PZ	915.56	9:11	6.27	909.29	
MP-284B	PZ	913.31	12:50	4.31	909.00	
MP-285B	PZ	915.27	13:20	7.35	907.92	
MP-290B	MW	898.71	9:13	6.80	891.91	
MP-299B	PZ	911.62	10:03	10.20	901.42	
MP-301B	PZ	907.90	9:42	8.82	899.08	
MP-303B	MW	906.24	9:30	4.75	901.49	
MP-401A	MW	906.37	9:20	10.67	895.70	
MP-402A	MW	908.42	10:33	4.61	903.81	
MP-403A	MW	912.37	9:45	8.85	903.52	
MP-404A	MW	915.09	10:16	7.32	907.77	
MP-405A	MW	911.02	10:00	7.55	903.47	
P-505A	PZ	915.97	11:17	10.35	905.62	
USPZ-1	PZ	908.00	9:32	6.13	901.87	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
880-PZ1	PZ	908.49	9:33	6.54	901.95	
880-PZ2	PZ	907.11	11:34	4.50	902.61	
880-PZ3	PZ	915.45	11:32	8.94	906.51	
880-PZ4	PZ	909.45	11:45	5.96	903.49	
880-PZ5	PZ	914.42	10:14	8.27	906.15	
M-06	PZ	932.75	10:32	8.60	924.15	
M-25	PZ	913.32	11:23	9.80	903.52	
MP-200R	PZ	913.79	12:02	15.19	898.60	
MP-201	PZ	909.86	11:10	6.36	903.50	
MP-202	MW	911.89	10:53	9.30	902.59	
MP-203R	PZ	927.77	11:06	17.60	910.17	
MP-204A	PZ	917.16	10:54	7.03	910.13	
MP-205BR	PZ	914.62	9:05	8.27	906.35	
MP-206	PZ	915.99	9:29	9.36	906.63	
MP-206CR	PZ	915.31	9:27	8.76	906.55	
MP-208	MW	907.57	9:19	9.12	898.45	
MP-210AR	MW	912.83	9:35	6.11	906.72	
MP-211BR	MW	911.09	9:45	7.74	903.35	
MP-212D	PZ	912.48	11:19	4.08	908.40	
MP-213A	MW	912.98	9:55	18.91	894.07	
MP-214BR	MW	910.29	9:52	15.95	894.34	
MP-216BR	MW	911.36	9:00	13.34	898.02	
MP-217A	PZ	914.14	10:02	16.77	897.37	
MP-217B	PZ	914.24	10:00	16.83	897.41	
MP-219A	MW	912.34	12:05	8.18	904.16	
MP-223AR	PZ	910.63	10:40	8.18	902.45	
MP-227AR	PZ	912.12	11:09	15.39	896.73	
MP-228AR	MW	911.64	11:02	15.07	896.57	
MP-228B	PZ	911.34	11:04	14.79	896.55	
MP-229B	PZ	910.63	10:57	14.07	896.56	
MP-230A	MW	908.75	10:53	13.86	894.89	
MP-232A	MW	909.75	10:43	15.39	894.36	
MP-233AR	MW	907.44	10:14	5.30	902.14	
MP-234AR	MW	910.90	10:31	7.54	903.36	
MP-235BR	MW	914.50	10:26	15.19	899.31	
MP-238AR	MW	916.36	10:11	9.40	906.96	
MP-241AR	MW	916.39	10:17	15.64	900.75	
MP-247A	PZ	908.47	11:55	14.44	894.03	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-248B	MW	909.77	10:01	7.38	902.39	
MP-249B	MW	903.68	9:03	2.81	900.87	
MP-250A	MW	910.24	11:54	10.86	899.38	
MP-251A	MW	911.54	9:38	5.39	906.15	
MP-252A	MW	894.88	9:50	2.26	892.62	
MP-261A	PZ	912.36	11:41	13.29	899.07	
MP-264	PZ	909.85	12:05	5.25	904.60	
MP-266A	PZ	899.54	8:56	6.39	893.15	
MP-269A	PZ	912.62	10:21	18.80	893.82	
MP-270A	PZ	911.54	10:03	17.57	893.97	
MP-271A	PZ	914.14	10:49	7.60	906.54	
MP-272A	PZ	913.37	12:41	4.96	908.41	
MP-273ARR	PZ	932.26	11:12	35.98	896.28	
MP-274A	MW	912.78	10:25	18.29	894.49	
MP-275	MW	911.89	9:55	15.15	896.74	
MP-276	MW	906.81	9:26	9.85	896.96	
MP-277A	MW	915.24	9:13	8.84	906.40	
MP-278A	PZ	919.23	10:57	9.26	909.97	
MP-280A	MW	912.28	10:04	18.24	894.04	
MP-281A	PZ	913.69	10:34	19.24	894.45	
MP-285A	PZ	916.14	4:33	8.31	907.83	
MP-289A	PZ	913.33	9:58	10.95	902.38	
MP-290A	PZ	899.09	9:14	6.27	892.82	
MP-294A	PZ	905.35	8:51	4.60	900.75	
MP-296A	PZ	902.90	8:58	4.20	898.70	
MP-300A	PZ	907.33	9:27	9.08	898.25	
MP-304A	MW	908.42	11:16	6.56	901.86	
MP-305A	MW	908.11	11:29	2.75	905.36	
MP-306A	MW	911.34	9:45	14.30	897.04	
MP-401B	MW	906.56	9:22	7.61	898.95	
P-500B	PZ	914.82	14:25	10.27	904.55	
P-501A	PZ	913.93	11:52	6.89	907.04	
P-511A	PZ	913.52	13:48	19.71	893.81	
P-515A	PZ	913.01	12:04	6.13	906.88	
P-517	PZ	912.34	12:22	4.85	907.49	
P-520	PZ	914.77	11:47	7.65	907.12	
P-527	PZ	894.90	9:29	3.46	891.44	
P-528	PZ	900.31	9:26	7.00	893.31	
P-529	PZ	902.51	9:24	3.62	898.89	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1C.
MEASURED WATER LEVELS IN THE CHANNEL SAND ZONE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3A	PZ	911.99	9:36	13.03	898.96	
13-12	PZ	913.13	14:00	17.49	895.64	
MP-215BR	MW	909.99	9:15	15.29	894.70	
MP-231BR	PZ	917.95	8:49	23.00	894.95	
MP-242AR	PZ	909.42	14:45	13.18	896.24	
MP-281C	MW	914.12	10:36	19.46	894.66	
MP-282C	PZ	911.37	9:25	16.16	895.21	
MP-283C	PZ	915.34	9:03	20.65	894.69	
MP-286C	MW	914.59	14:20	19.39	895.20	
MP-406C	MW	917.40	10:38	22.36	895.04	
P-500A	PZ	915.99	14:24	20.62	895.37	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3	PZ	910.04	9:35	3.55	906.49	
12-4	PZ	911.99	9:44	--	--	Obstruction
12-5	PZ	910.04	10:12	--	--	Obstruction @ 7.95'
12-6	PZ	914.67	10:18	20.03	894.64	
13-5	PZ	914.92	9:04	19.15	895.77	
14-1	PZ	917.02	10:42	22.41	894.61	
14-3	PZ	908.12	10:05	12.06	896.06	
14-4	PZ	911.16	10:08	15.24	895.92	
14-5	PZ	910.09	10:36	14.71	895.38	
14-7	PZ	917.05	10:46	22.36	894.69	
MP-209	PZ	923.14	11:00	20.86	902.28	
MP-214R	PZ	910.86	9:48	14.92	895.94	
MP-217R	PZ	912.91	9:57	16.33	896.58	
MP-221R	PZ	910.54	11:27	11.70	898.84	
MP-222R	PZ	911.89	11:02	12.35	899.54	
MP-223R	PZ	910.05	10:39	13.70	896.35	
MP-226	PZ	913.85	11:49	16.52	897.33	
MP-227R	MW	913.00	11:08	16.26	896.74	
MP-228R	PZ	911.41	11:00	13.89	897.52	
MP-230R	PZ	908.28	10:55	13.49	894.79	
MP-231R	PZ	916.06	8:53	20.34	895.72	
MP-233R	MW	907.00	10:16	11.14	895.86	
MP-234R	MW	911.88	10:29	14.02	897.86	
MP-235R	MW	914.84	10:23	17.71	897.13	
MP-237	MW	913.68	10:20	16.27	897.41	
MP-238R	MW	915.31	10:09	17.40	897.91	
MP-240R	PZ	923.97	10:24	23.78	900.19	
MP-240R1	PZ	922.46	10:23	22.90	899.56	
MP-241R	MW	913.57	10:18	16.40	897.17	
MP-242	PZ	908.37	14:46	--	> 908.37	Flowing
MP-243	PZ	883.37	9:02	<0.00	>883.37	
MP-244R	MW	909.73	11:44	12.12	897.61	
MP-248	PZ	909.81	10:02	12.55	897.26	
MP-249	PZ	904.29	9:04	9.00	895.29	
MP-250	MW	910.07	11:52	12.12	897.95	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-251	PZ	910.99	9:40	9.01	901.98	
MP-252	MW	894.59	9:53	<0.00	> 894.59	Flowing
MP-253	PZ	901.36	9:08	8.11	893.25	
MP-254	PZ	886.47	9:04	0.36	886.11	
MP-255	PZ	909.81	11:07	12.55	897.26	
MP-256	PZ	909.57	11:11	21.20	888.37	
MP-259	PZ	904.17	9:11	8.28	895.89	
MP-260	PZ	911.12	10:34	18.10	893.02	
MP-265	PZ	886.34	8:53	3.11	883.23	
MP-266	PZ	899.14	8:57	10.75	888.39	
MP-267	PZ	891.68	8:59	3.24	888.44	
MP-269	PZ	912.79	10:22	20.78	892.01	
MP-270	MW	911.94	10:02	16.56	895.38	
MP-271	PZ	914.70	10:48	14.73	899.97	
MP-272	PZ	912.79	12:42	8.00	904.79	
MP-273B	PZ	932.17	11:10	37.52	894.65	
MP-274	MW	912.20	10:24	17.42	894.78	
MP-279	MW	910.36	9:52	9.72	900.64	
MP-280	MW	912.49	10:02	14.06	898.43	
MP-281	MW	913.53	10:30	18.83	894.70	
MP-284	PZ	913.43	12:52	6.85	906.58	
MP-285	PZ	915.37	13:18	11.31	904.06	
MP-287	PZ	889.18	8:50	0.11	889.07	
MP-290	PZ	898.20	9:15	1.06	897.14	
MP-294	PZ	906.14	8:52	11.73	894.41	
MP-296	PZ	902.87	8:59	8.32	894.55	
MP-304	MW	908.36	11:15	11.07	897.29	
MP-305	MW	907.74	11:17	13.15	894.59	
MP-404	MW	912.75	10:09	15.80	896.95	
MP-407	MW	910.31	10:39	15.21	895.10	
MP-408	MW	916.41	10:51	21.42	894.99	
MP-409	MW	911.83	9:43	9.62	902.21	
P-500	PZ	914.68	14:23	11.05	903.63	
P-501	PZ	914.30	11:51	10.26	904.04	
P-503	PZ	916.15	11:34	12.38	903.77	
P-504	PZ	915.71	11:29	16.60	899.11	
P-505	PZ	916.40	11:18	16.88	899.52	
P-506	PZ	916.06	11:13	12.29	903.77	
P-508	PZ	913.19	10:42	22.03	891.16	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 4, 2021
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
P-509	PZ	909.97	10:34	14.61	895.36	
P-510	PZ	914.17	11:02	18.68	895.49	
P-511	PZ	913.22	13:49	15.25	897.97	
P-513	PZ	912.76	10:10	15.00	897.76	
P-515	PZ	913.13	12:03	9.20	903.93	

Note: PZ = piezometer; MW = monitoring well.

FIGURES

MP-284B MP-284
MP-272A MP-272
P-503
MP-285B MP-285A MP-285
P-504
P-517
P-520
P-505 P-505A
P-501A P-501
MP-242AR MP-242
P-515A P-515
P-506
P-500A
P-500B
P-500
MP-286C
MP-271 MP-271A
CRESCENT ISLE LAKE
P-508
MP-277B MP-277A
MP-206AR
MP-205D MP-205C MP-206CR
MP-206
MP-205BR
MP-210AR
SCMF 8
MP-251A MP-251
MP-231AR
MP-231R MP-231BR
MP-203A
SCMF 9
P-510
MP-204A
MP-203R
MP-205
MP-211BR MP-109
MP-278A
MP-276 MP-303B
MP-300A MP-301B
USPZ-1
MP-306A
MP-208
880-PZ1
MP-246
MP-299B
MP-248B MP-275
MP-248
MP-289A
CELL 1/2
MP-259
MP-260
FIRE POND 1
MP-224B
MP-207
MP-223R MP-223AR
MP-202
SLURRY WALL
M-06
INTERMEDIATE LANDFILL
CELL 3
MP-226
MP-227R
MP-227AR
MP-228AR MP-228R
MP-228BR MP-229B
MP-239B
SCMF 6
SCMF 7
MP-230R
MP-230A
CELL 11
(DID NOT RECEIVE WASTE)
MP-212A
MP-212B
MP-279
MP-273B
MP-273ARR
SCMF 10
MP-213A
P-509
MP-249B MP-249
MP-222B MP-268
MP-222R
MP-255
MP-296 MP-256
MP-255A
MP-240R
MP-240R1
MP-201
MP-296A
MP-304 880-PZ4
MP-304A
MP-294 MP-294A
M-25
MP-238AR
MP-238R
MP-237
MP-232A
MP-407
MP-408
14-7
MP-406A
MP-281A
MP-281
MP-281C
14-1
MP-274A MP-274
MP-404A
12-6
MP-280
MP-280A
MP-405A
P-511A P-511
MP-235BR
MP-235R MP-235AR
14-5
MP-404
12-5
MP-269 MP-269A
MP-221R
CELL 4/5
880-PZ5
MP-241AR
MP-241R
MP-234R
MP-234AR
MP-233AR
MP-233R
MP-402A
MP-305A 880-PZ2
MP-305
MP-220AR
MP-264
MP-219A
FIRE POND 4/5
MP-200R
MP-261A
MP-250
MP-244AR
MP-244R
MP-250A
MP-401B
MP-401A
14-4
14-3
MP-403A
MP-214R
MP-214BR
12-4
MP-270A MP-270
MP-287
MP-247A
MP-282C 12-2
12-3A
SANITARY LANDFILL
CELL 13
(DID NOT RECEIVE WASTE)
MP-215BR
MP-215A
MP-217A
MP-217B
MP-217R
P-513
MP-265
P-529
P-528
MP-283C 13-5
MP-252A
MP-252
P-527
MP-216BR
MP-290B MP-290A
MP-253A MP-253 MP-290
MP-266
MP-266A
13-12
MP-267
MP-254
MP-243
PERMITTED AREA BOUNDARY

LEGEND

- 880 SAND ZONE WELLS
- BEDROCK-TILL INTERFACE WELLS
- CHANNEL SAND WELLS
- UPPER SAND WELLS
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: NK	FIGURE TITLE: BASE MAP
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 1
DATE: 11/22/2021	

F:\AUTOCADX\CECOS\PSU\RFI\CECOS-10-2021.DWG 11/30/2021

MP-284B
909

MP-285B
907.92

P-505A
905.62

CRESCENT
ISLE LAKE

901.49
MP-303B
MP-301B
USPZ-1
901.87
899.08
MP-246
905.19
MP-299B
901.42

CELL 1/2

901

POND 1

SLURRY WALL

MP-207
900.27
MP-224B
908.82

INTERMEDIATE
LANDFILL

905

CELL 3

MP-222B
903.27
MP-268
902.97
MP-255A
906.37

MP-239B
907.77

SCMF 6

SCMF 7

CELL 4/5

903.46
MP-235CR
MP-235AR
906.55

MP-402A
903.81

MP-220AR
904.66

FIRE
POND 4/5

MP-244ARR
895.6

MP-401A
895.7

SANITARY
LANDFILL

MP-290B
891.91
MP-253A
891.27

MP-277B
909.29
MP-205D
908.69
MP-205C
907.16
MP-206AR
906.45

SCMF 8

MP-231AR
906.92

MP-213C
910.10
MP-212A
910.14

SCMF 9

CELL 11
(DID NOT RECEIVE WASTE)

MP-212A
908.02

SCMF 10

MP-405A
903.47

MP-404A
907.77

905

MP-403A
903.52

900

900

900

900

895

CELL 13
(DID NOT RECEIVE WASTE)

895

MP-215A
894.41

PERMITTED AREA BOUNDARY

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL)
  * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: NK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE, OCTOBER 4, 2021
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 2
DATE: 11/22/2021	

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CRESCENT ISLE LAKE

SCMF 8

SCMF 9

SCMF 6

SCMF 7

SCMF 10

CELL 1/2

CELL 3

CELL 4/5

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

SANITARY LANDFILL

FIRE POND 1

FIRE POND 4/5

INTERMEDIATE LANDFILL

SLURRY WALL

PERMITTED AREA BOUNDARY

MP-272A 908.41
MP-285A 907.83
MP-517 907.49
MP-520 907.12
MP-501A 907.04
MP-515A 906.88
MP-500B 904.55
MP-271A 906.54
MP-277A 906.4
906.55
MP-206CR
MP-206 906.63
MP-205BR 906.32
MP-210AR 906.72
MP-251A 906.15
MP-204A 910.13
MP-203R 910.17
MP-211BR 903.35
MP-278A 909.97
MP-212D 908.47
MP-213A 894.07
MP-280A 894.04
MP-273ARR 896.28
MP-281A 894.45
MP-274A 894.49
MP-214BR 894.34
MP-270A 893.97
MP-269A 893.82
P-511A 893.81
MP-216BR 898.02
MP-217A 897.37
MP-217B 897.41
MP-247A 894.03
MP-252A 892.62
P-527 891.44
P-528 893.31
P-529 898.89
MP-290A 892.82
MP-266A 893.15
MP-401B 898.95
MP-250A 899.38
MP-261A 899.07
MP-200R 898.6
MP-264 904.6
MP-219A 904.16
MP-305A 905.36
880-PZ2 902.61
880-PZ5
MP-241AR 900.75
906.15
MP-238AR 906.96
MP-235R 899.31
MP-234AR 903.36
MP-233AR 902.14
MP-232A 894.36
MP-230A 894.89
MP-229B 896.56
MP-228BR 896.55
MP-228AR 896.67
MP-227AR 896.73
MP-223AR 902.45
MP-202 902.59
M-06 924.15
880-PZ3 906.51
880-PZ4 903.49
MP-304A 901.86
M-25 903.52
MP-201 903.5
MP-294A 900.75
MP-296A 898.7
MP-249B 900.87
MP-208 898.45
MP-300A 898.25
896.96 MP-276
880-PZ1 901.95
MP-306A 897.04
902.39 MP-248B
MP-275 896.74
MP-289A 902.38
908
905
900
895
894
893

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING ** WATER LEVEL MEASUREMENT BLOCKED
- POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: NK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE, OCTOBER 4, 2021
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 3
DATE: 11/22/2021	

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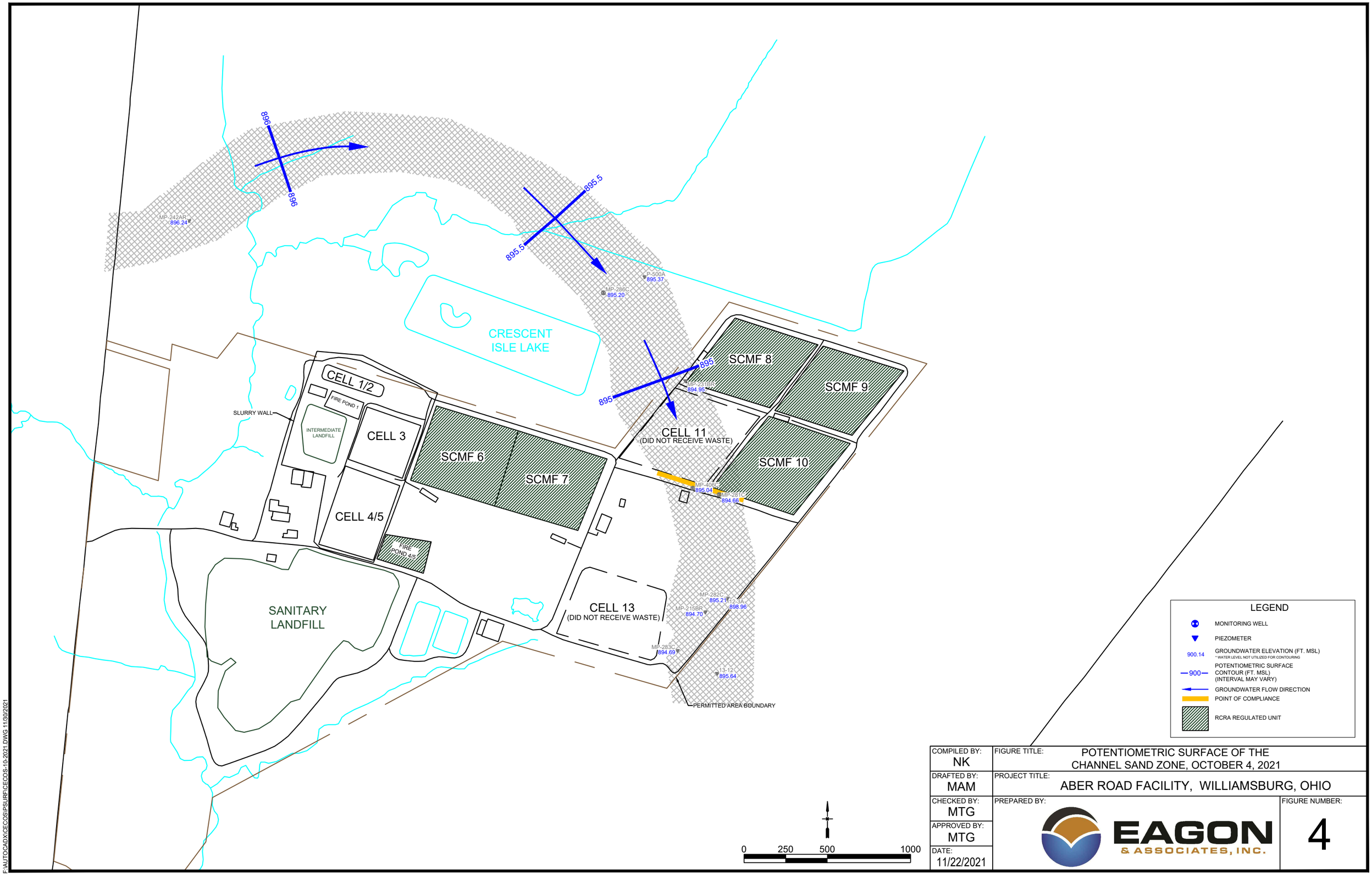

COMPILED BY: NK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE CHANNEL SAND ZONE, OCTOBER 4, 2021
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 4
DATE: 11/22/2021	

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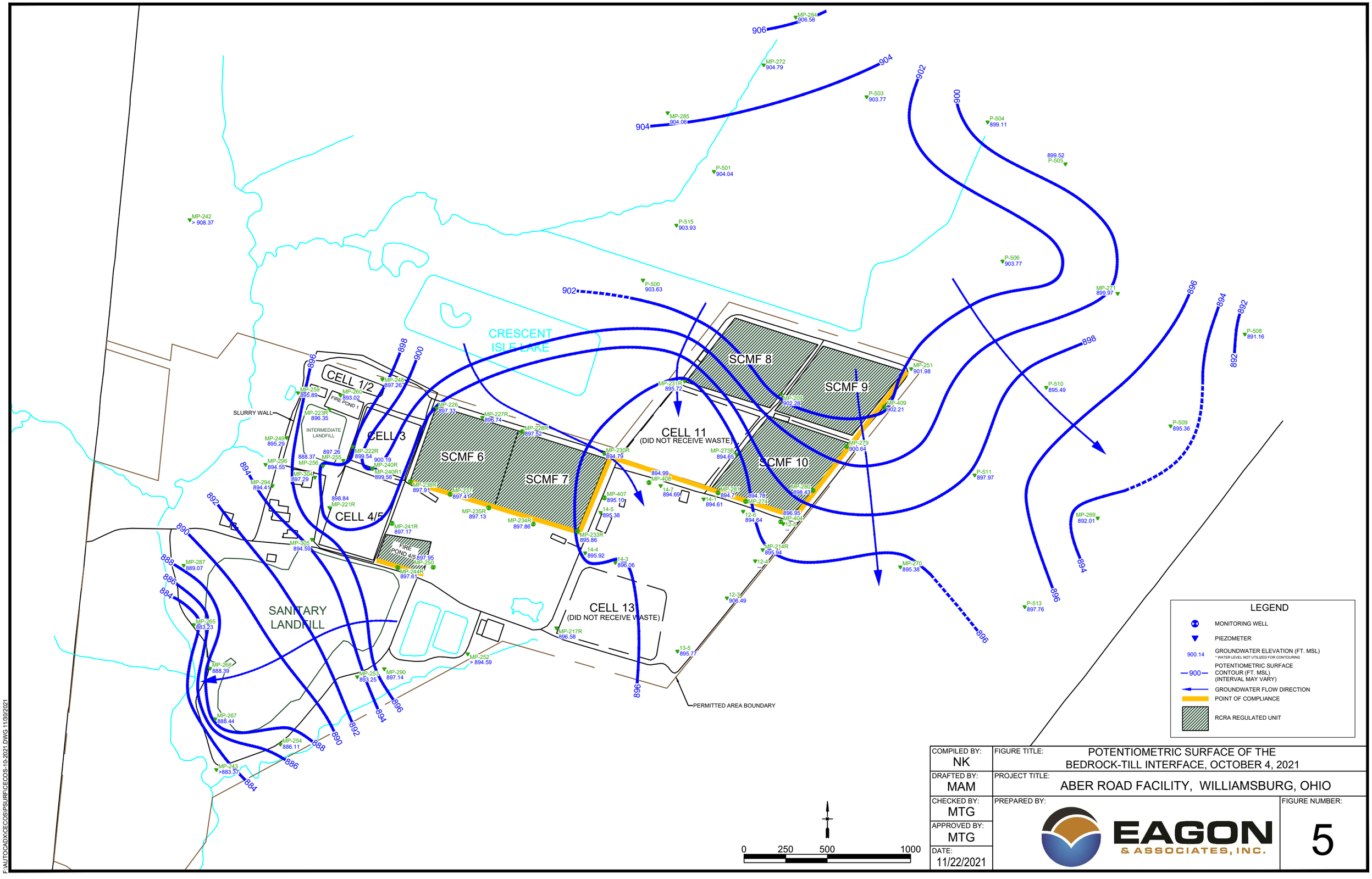

COMPILED BY: NK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE BEDROCK-TILL INTERFACE, OCTOBER 4, 2021
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 5
DATE: 11/22/2021	

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SECTION IV

TOTAL WEIGHT, MANIFEST NUMBERS, TREATMENT METHOD AND DISPOSAL DESTINATION OF TSCA LEACHATE FILTER CAKE

2021 Waste Profiles

Waste Profile Numbers - AI3875; AL375602; AL404069

The total TSCA leachate solids from the LTS filter press solids operation is summarized in the table below.

Manifest Numbers	No. of Drums	Weight (kg)	Weight (lb)
014268977	4	622	1,369
014269036	7	1,527	3,359
2021 TOTALS	**11**	**2,149**	**4,725**

Treatment Method: Land Disposal at Chemical Waste Management, Inc. facility.

Disposal Destination: **Final Destination at:**

Waste Management, Inc.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, AL 35459

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COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: OHD087433744
2. Page 1 of: 1
3. Emergency Response Phone: 800.427.9300
4. Manifest Tracking Number: 014268977 JJK

GENERATOR

5. Generator's Name and Mailing Address: Cecos International Inc. 5092 Abx Road Williamsburg Oh 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513.724.6114

6. Transporter 1 Company Name: Heritage Environmental Group Inc. U.S. EPA ID Number: NYD980769947

7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chemical Waste Management, Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 U.S. EPA ID Number: ALD000622464
Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S. 9, III, (F039, Polychlorinated Biphenyls)	2	DM	186.36	K	F039
X	2. RQ, NA3077 Hazardous Waste Solid III (F039, Polychlorinated Biphenyls) N.O.S. 9	1	DM	249.48	K	F039
	3. RQ, NA3077 Hazardous Waste Solid III (F039, Polychlorinated Biphenyls) N.O.S. 9	1	DM	186.36	K	F039
	4.					

14. Special Handling Instructions and Additional Information
Tx. Profile # AL-4041069 AL-375602 AL 3875
TRL # B156

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett Signature: Barry Beckett Month: 01 Day: 27 Year: 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: NORMAN BRUNES Signature: Norman Brunes Month: 01 Day: 27 Year: 21
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Signature: Month: Day: Year:

HAZMAT ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.com
FAX (716) 242-4558
(716) 827-7200

HAZMAT

NYDEC #9A-278
EPA ID# NYD980769947

DATE 890838
01/27/21

PICK UP

SHIPPER

NAME BROWNING FERRIS (BFI-GOS)
STREET 5092 AMBER RD
CITY WILLIAMSBURG STATE OH ZIP CODE
CONTACT NAME PHONE
SCHEDULED TIME

DELIVERY

CONSIGNEE

NAME WASTE-NAUGHT.
STREET 36961 DLS HWY 17
CITY EMELLE STATE AL ZIP CODE
CONTACT NAME PHONE

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, Item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

PURCHASE ORDER NO.	WORK ORDER NUMBER	MANIFEST NUMBER	H.M. NUMBER
8813452		014268977 JJK	5041153

LOAD NUMBER	TRACTOR	TRAILER	ROLL OFF BOX	DRIVER NUMBER	DRIVER'S NAME
	601	0156		182	JCARNES

EQUIPMENT	MATERIAL DESCRIPTION/MANIFEST NUMBER	QUANTITY
EQUIPMENT TYPE ____ UNIT# DROPPED ____ UNIT# PICKED UP ____ CONDITION REPORT ____	RQWASTE 3077	4 DM

Product unloading station and/or tank approved by:

CONSIGNEE'S SIGNATURE

Compressor used YES ____ NO ____
In-Transit Heat used: YES ____ NO ____
Analysis/C of A: YES ____ NO ____

PICK UP

PICK UP DATE 01-27-21
ARRIVAL TIME 0916 AM PM RELEASE TIME 01000 AM PM
DAY #2 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER EMPTY UPON ARRIVAL ☐ YES
(if not, explain below—)
DIP MEASUREMENT (Tankers Only) ____ INCHES
COMMENTS: (EXPLAIN ALL DELAYS) ____

HAZMAT MATERIALS USED (ex. overpacks, etc.): ☐ YES ☐ NO
IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

SHIPPER'S SIGNATURE Date 1-27-21

DELIVERY

DRIVER ____ DAY #1 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #2 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #3 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER CLEAN AND EMPTY UPON DEPARTURE ☐ YES ☐ NO
(if not, explain below—)
COMMENTS: (Explain all delays or discrepancies)) ____

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

CONSIGNEE'S SIGNATURE Date

HAZMAT BILL OF LADING GENERATOR COPY

SLOT # 22

GENERATORS NAME: CECOS INTERNATIONAL INC

MANIFEST NUMBER: 014268977JJK-1

DISCREPANCY DETAILS:

1. DRUM COUNT

Line 1 MANIFEST STATES 2 ACTUAL DRUM COUNT IS 1

Line 2 MANIFEST STATES 1 ACTUAL DRUM COUNT IS 2

2. INCORRECT MARKED DRUMS. _____

3. INCORRECT/INCOMPLETE MANIFEST. ~~ID~~ ~~QTY~~ Profile AL4044069 on PER cert of service sheet only 1 ID# 2-ID# for Line #2

4. OTHER _____

Clifton Wells 1-28-21
SAMPLERS SIGNATURE DATE

Lester Burrell
SUPERVISORS SIGNATURE

RESOLUTION:

PERSON CONTACTED: _____ DATE: _____

DETAILS: _____

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
OHD087433744	1	800.424.9300	014268977 JJK

GENERATOR

5. Generator's Name and Mailing Address: Cecos International Inc. 5092 Abs. Road Williamsburg OH 45176

Generator's Site Address (if different than mailing address):

Generator's Phone: 513 724 2114

6. Transporter 1 Company Name: Heritage Environmental Group Inc. — U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chemical Waste Management Inc. Alabama Hwy. 17 M.M. 163 Emelle AL 35459 — U.S. EPA ID Number: ALD000622464

Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S. 9, III, CF039, Polychlorinated Biphenyls)	2	DM	186.36	K	F039
X	2. RQ, NA3077 Hazardous Waste Solid N.O.S. 9 III CF039, Polychlorinated Biphenyls	1	DM	249.48	K	F039
	3. RQ, NA3077 Hazardous Waste Solid III CF039, Polychlorinated Biphenyls N.O.S. 9	1	DM	186.36	K	F039
	4.					

14. Special Handling Instructions and Additional Information: Tx. Profile # AL-4041069 AL-375602 AL 3875 TRC # B15C

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett — Signature: Barry Beckett — Month 01 Day 27 Year 21

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

Transporter signature (for exports only):

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: NORMAN CRUCES — Signature: Norman Cruces — Month 01 Day 27 Year 21

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tammy Thrash — Signature: Tammy Thrash — Month 01 Day 28 Year 21

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE IF REQUIRED

PCB Out of Service Worksheet
Prepared by: Andrew Thompson
On Behalf of CECOS International, Inc.

Manifest Doc.# 014268977 JJK - State Manifest # OHD087433741

Unique Drum ID Number	Waste Profile	Out of Service	Total Wt. Per Drum (KG)	Net PCB Wt. Per Drum (KG)
3265	AL-404069	11-2-20	249.48	0.016
3266	AL-375602	11-2-20	93.18	0.016
3267	AL-375602	1-5-21	93.18	0.016
3268	AI3875	1-15-21	186.36	0.016

Date: 1-27-21

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Infomation

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: CECOS INTERNATIONAL INC
Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

014268977JJK

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management. (RCRA)

Al Talbott
Safety Manager

February 08, 2021

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number: 014268977 JJK

GENERATOR

5. Generator's Name and Mailing Address | Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name | U.S. EPA ID Number

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address | U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste, Solid, N.O.S. (Toxic, Polychlorinated Biphenyls) III	1	DM	126.36	K	F039
X	2. RQ, NA3077, Hazardous Waste, Solid, N.O.S. (F039, Polychlorinated Biphenyls) III	2	DM	247.72	K	F039
	3. RQ, NA3077, Hazardous Waste, Solid, N.O.S. (F039, Polychlorinated Biphenyls) III	1	DM	126.36	K	F039
	4.					

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Count correction per A. Thompson DRRB 2/17/21

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H132	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month | Day | Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: OHD087433744 | 2. Page 1 of: 1 | 3. Emergency Response Phone: 800.424.9300 | 4. Manifest Tracking Number: 014268977 JJK

GENERATOR

5. Generator's Name and Mailing Address: Cecos International Inc. 5092 Abx Road Williamsburg OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513.724.6114

6. Transporter 1 Company Name: Heritage Environmental Group, Inc. | U.S. EPA ID Number: NYD980769947

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc. Alabama Hwy. 17, M.M. 163 Emelle, AL 35459 | U.S. EPA ID Number: ALD000622464
Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid N.O.S. 9, III, CF039, Polychlorinated Biphenyls)	2	DM	186.36	K	F039		
X	2. RQ, NA3077 Hazardous Waste Solid III CF039, Polychlorinated Biphenyls N.O.S. 9	2	DM	249.48	K	F039		
	3. RQ, NA3077 Hazardous Waste Solid III CF039, Polychlorinated Biphenyls N.O.S. 9	1	DM	186.36	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9a. Profile # AL-4041069 AL-375602 AI 3875 TRL # B156

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett | Signature: Barry Beckett | Month 01 Day 27 Year 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: NORMAN CARNES | Signature: Norman Carnes | Month 01 Day 27 Year 21

Transporter 2 Printed/Typed Name | Signature | Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Count correction per A. Thompson 1/21/21
Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H132	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Tammy Thrash | Signature: Tammy Thrash | Month 01 Day 28 Year 21

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received waste material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 006461653GBF

Chemical Waste Management, Inc. hereby certifies that the Non "PCB" line item(s) was/were disposed of on/or before the date(s) shown below in accordance with State and Federal Regulations.

Al Talbott /cm

Al Talbott, Safety Manager
March 16, 2021

LN	Profile	Quantity	Disposal Date	Description
1	AL404069	1	02/06/2021	LEACHATE SOLIDS - OILY SLUDGE

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 014268977JJK-2
Waste Management, Inc. hereby certifies that the above described material (excluding PCB liquids, if applicable) was landfilled on the dates shown below, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representation (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Al Talbott, Safety Manager
March 22, 2021

OSD	Unique ID	Cont #	Profile	Disposed	Description
1/5/21	3267	1	AL375602	3/5/21	LEACHATE CONTAMINATED DEBRIS
11/2/20	3266	2	AL375602	3/5/21	LEACHATE CONTAMINATED DEBRIS

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: OHD087433744
2. Page 1 of: 1
3. Emergency Response Phone: 800.424.9300
4. Manifest Tracking Number: 014269036 JJK

5. Generator's Name and Mailing Address: Cecos International Inc.
5092 Abercrombie Rd. Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513.724.6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc.
U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc.
Alabama Hwy. 17 M.M. 163
Emelle, AL 35459
U.S. EPA ID Number: ALD000 622464
Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	5	DM	1247.4	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	1	DM	186.36	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	1	DM	93.18	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9A. #1 Profile # AL 404068
9A. #2 Profile # AI 3875
9A. #3 AL 375602

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR
Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [signature] Month: 10 Day: 12 Year: 21

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: PAT SOMMER Signature: [signature] Month: 10 Day: 12 Year: 21
Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
~~H132~~ H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Annette Wilson Signature: [signature] Month: 10 Day: 18 Year: 21

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HazMat

ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.com

FAX (716) 242-4558
(716) 827-7200

HAZMAT

NYDEC #9A-278
EPA ID# NYD980769947

DATE 897991
10/17/21

PICK UP

SHIPPER

NAME: BROWNING FERRIS
STREET: 5092 ASER RD
CITY: WILLIAMSBURG STATE: OH ZIP CODE: 45176
CONTACT NAME: Doug KOTTWINKEL PHONE:
SCHEDULED TIME: 0800-1300

DELIVERY

CONSIGNEE

NAME: WASTE MGT
STREET: 36764 AL-17
CITY: EMELLE STATE: AL ZIP CODE: 35459
CONTACT NAME: JIM TURNER PHONE: 205-652-9721

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

7 PCS-

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, Item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

SR# 1157323

PURCHASE ORDER NO.	WORK ORDER NUMBER	MANIFEST NUMBER	H.M. NUMBER
		014769036 JJK	525731

LOAD NUMBER	TRACTOR	TRAILER	ROLL OFF BOX	DRIVER NUMBER	DRIVER'S NAME
	725	B-701		SONI PAT	PAT SONIER

EQUIPMENT	MATERIAL DESCRIPTION/MANIFEST NUMBER	QUANTITY
EQUIPMENT TYPE V UNIT# DROPPED UNIT# PICKED UP CONDITION REPORT	7 DRUMS CLASS 9 PCB's	3359 POUNDS

Product unloading station and/or tank approved by:

CONSIGNEE'S SIGNATURE

Compressor used YES ____ NO ____
In-Transit Heat used: YES ____ NO ____
Analysis/C of A: YES ____ NO ____

PICK UP — LD - BROWIL

PICK UP DATE 10-17-21
ARRIVAL TIME 1130 AM PM RELEASE TIME ____ AM PM
DAY #2 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER EMPTY UPON ARRIVAL ☐ YES (if not, explain below—)
DIP MEASUREMENT (Tankers Only) ____ INCHES
COMMENTS: (EXPLAIN ALL DELAYS) ____

LOAD, SECURE, PAPERWORK

HAZMAT MATERIALS USED (ex. overpacks, etc.): ☐ YES ☐ NO
IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

SHIPPER'S SIGNATURE 10-17-21 Date

DELIVERY — LD - WASEMG

DRIVER ____ DAY #1 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #2 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #3 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER CLEAN AND EMPTY UPON DEPARTURE ☐ YES ☐ NO (if not, explain below—)
COMMENTS: (Explain all delays or discrepancies)) ____

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

CONSIGNEE'S SIGNATURE Date

HAZMAT BILL OF LADING GENERATOR COPY

10/07/98

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV)

Generator Name: CECOS INTERNATIONAL INC

Profile Number: AI3875

Manifest Doc. No.: 014269036 JJK

State Manifest No:

PFA-AI3875

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Nonwastewater X Wastewater
2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent treatment standards are listed on the following page. If F039, multi-source leachate applies, those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

REF #	3. US EPA HAZARDOUS WASTE CODE(S)	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK NONE — DESCRIPTION	NONE	5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM BELOW
1	F039			
2			X	A
3				
4				

To identify F039 or D001-D043, underlying hazardous constituent(s), use the "F039/Underlying Hazardous Constituent Form" provided (CWM-2004) and check here:

If no UHCs are present in the waste upon its initial generation check here: X

To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (CWM-2003-B) and check here:

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4 or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT
This waste must be treated to the applicable treatment standards set forth in 40 CFR 268.40.
For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.2 (Certification removed by Phase IV.)

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet Universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE
This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature [signature] Title Tech Date 10-12-21

1990 Chemical Waste Management, Inc. - 06/98- Form CWM-2003-C

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV) -REVERSE SIDE

RCA-AI3878

SOLVENT

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

SOLVENT WASTE TREATMENT STANDARDS[2]

F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard[1]		F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard[1]	
	Wastewaters	Nonwastewaters		Wastewaters	Nonwastewaters

1 All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

2 For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of constituents or less than 10 x the standards listed.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a)(1) High TOC subcategory.
B. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon.

1990 Chemical Waste Management, Inc. - 08/98 - Form CWM-2005-C

Sent by:BFI CECOS NOV-17-99 12:44PM from 5132245223+216827121 NO.444 P.7/8 6/7

PCB Out of Service Worksheet
Prepared by: Andrew Thompson
On Behalf of CECOS International, Inc.

Manifest Doc.# 014269036 - State Manifest # _____

Unique Drum ID Number	Waste Profile	Out of Service	Total Wt. Per Drum (KG)	Net PCB Wt. Per Drum (KG)
3269	AL-404069	7-15-21	249.48	0.016
3270	AL-404069	7-16-21	249.48	0.016
3271	AL-404069	7-16-21	249.48	0.016
3272	AL-404069	7-16-21	249.48	0.016
3273	AL-404069	7-16-21	249.48	0.016
3274	AI3875	9-28-21	186.36	0.016
3275	AL-375602	9-28-21	93.18	0.016

Date: 10-12-21

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: OHD087433744
2. Page 1 of: 1
3. Emergency Response Phone: 800.424.9300
4. Manifest Tracking Number: 014269036 JJK

5. Generator's Name and Mailing Address: Cecos International Inc.
5092 Abercrombie Rd. Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513.724.6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc.
U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc.
Alabama Hwy. 17 M.M. 163
Emelle, AL 35459
U.S. EPA ID Number: ALD000 622464
Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	5	DM	1247.4	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	1	DM	186.36	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, CF039, Polychlorinated Biphenyls)	1	DM	93.18	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9A. #1 Profile # AL 404068
9A. #2 Profile # AI 3875
9A. #3 AL 375602

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

GENERATOR
Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [signature] Month: 10 Day: 12 Year: 21

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: PAT SOMMER Signature: [signature] Month: 10 Day: 12 Year: 21
Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
~~H132~~ H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Annette Wilson Signature: [signature] Month: 10 Day: 18 Year: 21

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: OHD 087433744
2. Page 1 of: 1
3. Emergency Response Phone: 800.429.9300
4. Manifest Tracking Number: 014269036 JJK

GENERATOR

5. Generator's Name and Mailing Address: Cecos International Inc.
5092 Abx Road
Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513.724.6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc.
U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc.
Alabama Hwy. 17 M.M. 163
Emelle, AL 35459
U.S. EPA ID Number: ALD000 622464
Facility's Phone: 205.652.9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls)	5	DM	1247.4	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls)	1	DM	186.36	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls)	1	DM	93.18	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9A. #1 Profile # AL 404068 9A. #3 AL 375602
9A. #2 Profile # AI 3875

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [signature] Month: 10 Day: 12 Year: 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: PAT SOMMER Signature: [signature] Month: 10 Day: 12 Year: 21

Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
~~H132~~ H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Annette Wilson Signature: [signature] Month: 10 Day: 18 Year: 21

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Infomation

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: CECOS INTERNATIONAL INC
Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

014269036JJK

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management. (RCRA)

Al Talbott
Safety Manager

November 02, 2021

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

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Al Talbott
Safety Manager

November 02, 2021

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 014269036JJK-3
Waste Management, Inc. hereby certifies that the above described material (excluding PCB liquids, if applicable) was landfilled on the dates shown below, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representation (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Al Talbott, Safety Manager
December 09, 2021

OSD	Unique ID	Cont #	Profile	Disposed	Description
9/28/21	3275	1	AL375602	12/3/21	LEACHATE CONTAMINATED DEBRIS

SECTION V

RESULTS OF LTS BATCH SAMPLING

LEACHATE TREATMENT SYSTEM EFFLUENT
CECOS LANDFILL, WILLIAMSBURG, OHIO
2021 BATCH SAMPLING RESULTS

Sample Date	Total PCB Results (ug/L)
1/8/2021	153
1/20/2021	460
1/22/2021	63
1/29/2021	186
2/8/2021	337
3/1/2021	55
3/2/2021	67
3/24/2021	586
3/26/2021	115
4/8/2021	173
5/4/2021	316
5/7/2021	85
5/25/2021	79
6/10/2021	2,200
6/24/2021	149
7/1/2021	1,912
7/19/2021	6,160
7/27/2021	141
8/12/2021	5,880
8/19/2021	71
9/1/2021	2,390
9/2/2021	942
9/15/2021	65
10/1/2021	430
10/21/2021	196
10/22/2021	355
11/18/2021	946
12/10/2021	1,290
12/28/2021	237
12/29/2021	463

CERTIFICATE OF ANALYSIS
M1A0486

Analytical Testing Parameters

Client Sample ID: 21499-A
Sample Matrix: Aqueous
Lab Sample ID: M1A0486-01 **Collection Date:** 01/08/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<5.00	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1221 (PCB-1221)	<5.00	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1232 (PCB-1232)	<5.00	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1242 (PCB-1242)	**64.4**	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1248 (PCB-1248)	<5.00	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1254 (PCB-1254)	<5.00	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Aroclor-1260 (PCB-1260)	**88.6**	5.00	ug/L	10		01/12/21 0853	01/13/21 1656	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	975	Limit: 30-132	% Rec	10	**S1**	01/12/21 0853	01/13/21 1656	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	40.0	Limit: 30-130	% Rec	10		01/12/21 0853	01/13/21 1656	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1A0491	B1A0491-BLK1	
		B1A0491-BS1	
		B1A0491-BSD1	
		M1A0486-01	21499-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1A0491 - 3510C_8082 - EPA 8082A										
Blank (B1A0491-BLK1)			Prepared: 01/12/2021 Analyzed: 01/13/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.167*		ug/L	*0.200*		*83.7*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.160*		ug/L	*0.200*		*79.9*	*30-130*			
LCS (B1A0491-BS1)			Prepared: 01/12/2021 Analyzed: 01/13/2021							
Aroclor-1016 (PCB-1016)	2.29	0.500	ug/L	2.50		91.8	46-150			
Aroclor-1260 (PCB-1260)	2.20	0.500	ug/L	2.50		88.2	45-150			
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.160*		ug/L	*0.200*		*80.2*	*30-132*			

CERTIFICATE OF ANALYSIS

M1A1504

Analytical Testing Parameters

Client Sample ID: 21451-A
Sample Matrix: Aqueous
Lab Sample ID: M1A1504-01 **Collection Date:** 01/20/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1545	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1545	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1545	ECL
Aroclor-1242 (PCB-1242)	**210**	50.0	ug/L	100		01/27/21 1330	01/28/21 1620	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1545	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1545	ECL
Aroclor-1260 (PCB-1260)	**250**	50.0	ug/L	100		01/27/21 1330	01/28/21 1620	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	284	Limit: 30-132	% Rec	1	**S1**	01/27/21 1330	01/28/21 1545	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	439	Limit: 30-132	% Rec	100	**S3**	01/27/21 1330	01/28/21 1620	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	95.1	Limit: 30-130	% Rec	1		01/27/21 1330	01/28/21 1545	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	01/27/21 1330	01/28/21 1620	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1A1277	B1A1277-BLK1	
		B1A1277-BS1	
		B1A1277-BSD1	
		B1A1277-MRL1	
		M1A1504-01	21451-A
		M1A1504-01RE1	21451-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1A1277 - 3510C_8082 - EPA 8082A										
Blank (B1A1277-BLK1)			Prepared: 01/27/2021 Analyzed: 01/28/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.161*		ug/L	*0.200*		*80.3*	*30-132*			

CERTIFICATE OF ANALYSIS
M1A1506

Analytical Testing Parameters

Client Sample ID: 21450-A
Sample Matrix: Aqueous
Lab Sample ID: M1A1506-01 **Collection Date:** 01/22/2021 9:45

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1637	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1637	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1637	ECL
Aroclor-1242 (PCB-1242)	**37.2**	5.00	ug/L	10		01/27/21 1330	01/28/21 1654	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1637	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		01/27/21 1330	01/28/21 1637	ECL
Aroclor-1260 (PCB-1260)	**25.6**	5.00	ug/L	10		01/27/21 1330	01/28/21 1654	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	217	Limit: 30-132	% Rec	1	**S1**	01/27/21 1330	01/28/21 1637	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	251	Limit: 30-132	% Rec	10	**S1**	01/27/21 1330	01/28/21 1654	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	87.1	Limit: 30-130	% Rec	1		01/27/21 1330	01/28/21 1637	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	147	Limit: 30-130	% Rec	10	**S1**	01/27/21 1330	01/28/21 1654	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1A1277	B1A1277-BLK1	
		B1A1277-BS1	
		B1A1277-BSD1	
		B1A1277-MRL1	
		M1A1506-01	21450-A
		M1A1506-01RE1	21450-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1A1277 - 3510C_8082 - EPA 8082A										
Blank (B1A1277-BLK1)			Prepared: 01/27/2021 Analyzed: 01/28/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.161*		ug/L	*0.200*		*80.3*	*30-132*			

CERTIFICATE OF ANALYSIS

M1B0180

Analytical Testing Parameters

Client Sample ID: 21452-A
Sample Matrix: Aqueous
Lab Sample ID: M1B0180-01 **Collection Date:** 01/29/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		02/05/21 1050	02/05/21 2025	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		02/05/21 1050	02/05/21 2025	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		02/05/21 1050	02/05/21 2025	ECL
Aroclor-1242 (PCB-1242)	**72.6**	10.0	ug/L	20		02/05/21 1050	02/08/21 1149	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		02/05/21 1050	02/05/21 2025	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		02/05/21 1050	02/05/21 2025	ECL
Aroclor-1260 (PCB-1260)	**113**	10.0	ug/L	20		02/05/21 1050	02/08/21 1149	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	659	Limit: 30-132	% Rec	1	**S1**	02/05/21 1050	02/05/21 2025	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	20	**S3**	02/05/21 1050	02/08/21 1149	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	24.6	Limit: 30-130	% Rec	1	**S2**	02/05/21 1050	02/05/21 2025	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	02/05/21 1050	02/08/21 1149	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1B0299	B1B0299-BLK1	
		B1B0299-BS1	
		B1B0299-BSD1	
		M1B0180-01	21452-A
		M1B0180-01RE1	21452-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1B0299 - 3510C_8082 - EPA 8082A										
Blank (B1B0299-BLK1)			Prepared & Analyzed: 02/05/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.156*		ug/L	*0.200*		*78.1*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.134*		ug/L	*0.200*		*67.2*	*30-130*			

CERTIFICATE OF ANALYSIS

M1B0943

Analytical Testing Parameters

Client Sample ID: 21453-A
Sample Matrix: Aqueous
Lab Sample ID: M1B0943-01 **Collection Date:** 02/08/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<10.0	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1221 (PCB-1221)	<10.0	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1232 (PCB-1232)	<10.0	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1242 (PCB-1242)	**268**	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1248 (PCB-1248)	<10.0	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1254 (PCB-1254)	<10.0	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Aroclor-1260 (PCB-1260)	**68.6**	10.0	ug/L	20		02/15/21 1055	02/18/21 1600	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	20	**S3**	02/15/21 1055	02/18/21 1600	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	02/15/21 1055	02/18/21 1600	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1B0642	B1B0642-BLK1	
		B1B0642-BS1	
		B1B0642-BSD1	
		M1B0943-01	21453-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1B0642 - 3510C_8082 - EPA 8082A										
Blank (B1B0642-BLK1)			Prepared: 02/15/2021 Analyzed: 02/18/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.0398*		ug/L	*0.200*		*19.9*	*30-132*			*S2*
Surrogate: Decachlorobiphenyl (BZ-209)	*0.153*		ug/L	*0.200*		*76.7*	*30-130*			
LCS (B1B0642-BS1)			Prepared: 02/15/2021 Analyzed: 02/18/2021							
Aroclor-1016 (PCB-1016)	4.09	0.500	ug/L	5.00		81.9	46-150			
Aroclor-1260 (PCB-1260)	4.96	0.500	ug/L	5.00		99.2	45-150			
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.249*		ug/L	*0.200*		*125*	*30-132*			

CERTIFICATE OF ANALYSIS

M1C0272

Analytical Testing Parameters

Client Sample ID: 21454-A
Sample Matrix: Aqueous
Lab Sample ID: M1C0272-01 **Collection Date:** 03/01/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		03/04/21 1118	03/06/21 1055	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		03/04/21 1118	03/06/21 1055	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		03/04/21 1118	03/06/21 1055	ECL
Aroclor-1242 (PCB-1242)	**35.0**	5.10	ug/L	10		03/04/21 1118	03/06/21 1113	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		03/04/21 1118	03/06/21 1055	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		03/04/21 1118	03/06/21 1055	ECL
Aroclor-1260 (PCB-1260)	**19.5**	5.10	ug/L	10		03/04/21 1118	03/06/21 1113	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	108	Limit: 30-132	% Rec	1		03/04/21 1118	03/06/21 1055	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	114	Limit: 30-132	% Rec	10		03/04/21 1118	03/06/21 1113	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	55.8	Limit: 30-130	% Rec	1		03/04/21 1118	03/06/21 1055	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	69.3	Limit: 30-130	% Rec	10		03/04/21 1118	03/06/21 1113	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1C0263	B1C0263-BLK1	
		B1C0263-BS1	
		B1C0263-BSD1	
		M1C0272-01	21454-A
		M1C0272-01RE1	21454-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1C0263 - 3510C_8082 - EPA 8082A										
Blank (B1C0263-BLK1)			Prepared: 03/04/2021 Analyzed: 03/05/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.165*		ug/L	*0.200*		*82.4*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.161*		ug/L	*0.200*		*80.5*	*30-130*			

CERTIFICATE OF ANALYSIS

M1C0274

Analytical Testing Parameters

Client Sample ID: 21455-A
Sample Matrix: Aqueous
Lab Sample ID: M1C0274-01 **Collection Date:** 03/02/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		03/04/21 1118	03/06/21 1147	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		03/04/21 1118	03/06/21 1147	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		03/04/21 1118	03/06/21 1147	ECL
Aroclor-1242 (PCB-1242)	**40.1**	5.00	ug/L	10		03/04/21 1118	03/06/21 1205	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		03/04/21 1118	03/06/21 1147	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		03/04/21 1118	03/06/21 1147	ECL
Aroclor-1260 (PCB-1260)	**26.6**	5.00	ug/L	10		03/04/21 1118	03/06/21 1205	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	85.7	Limit: 30-132	% Rec	1		03/04/21 1118	03/06/21 1147	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	141	Limit: 30-132	% Rec	10	**S1**	03/04/21 1118	03/06/21 1205	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	141	Limit: 30-130	% Rec	1	**S1**	03/04/21 1118	03/06/21 1147	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	157	Limit: 30-130	% Rec	10	**S1**	03/04/21 1118	03/06/21 1205	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B1C0263	B1C0263-BLK1	
		B1C0263-BS1	
		B1C0263-BSD1	
		M1C0274-01	21455-A
		M1C0274-01RE1	21455-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B1C0263 - 3510C_8082 - EPA 8082A										
Blank (B1C0263-BLK1)			Prepared: 03/04/2021 Analyzed: 03/05/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.165*		ug/L	*0.200*		*82.4*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.161*		ug/L	*0.200*		*80.5*	*30-130*			

CERTIFICATE OF ANALYSIS

M1C2231

Analytical Testing Parameters

Client Sample ID: 21456-A
Sample Matrix: Aqueous
Lab Sample ID: M1C2231-01
Collection Date: 03/24/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		03/30/21 1105	03/31/21 1604	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		03/30/21 1105	03/31/21 1604	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		03/30/21 1105	03/31/21 1604	ECL
Aroclor-1242 (PCB-1242)	**226**	51.0	ug/L	100		03/30/21 1105	03/31/21 1639	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		03/30/21 1105	03/31/21 1604	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		03/30/21 1105	03/31/21 1604	ECL
Aroclor-1260 (PCB-1260)	**360**	51.0	ug/L	100		03/30/21 1105	03/31/21 1639	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	233	Limit: 30-132	% Rec	1	**S1**	03/30/21 1105	03/31/21 1604	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	403	Limit: 30-132	% Rec	100	**S3**	03/30/21 1105	03/31/21 1639	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	57.6	Limit: 30-130	% Rec	1		03/30/21 1105	03/31/21 1604	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	03/30/21 1105	03/31/21 1639	ECL

Analytical Testing Parameters

Client Sample ID: 21457-A
Sample Matrix: Aqueous
Lab Sample ID: M1C2494-01 **Collection Date:** 03/26/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		04/01/21 1120	04/02/21 1552	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		04/01/21 1120	04/02/21 1552	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		04/01/21 1120	04/02/21 1552	ECL
Aroclor-1242 (PCB-1242)	**44.8**	5.10	ug/L	10		04/01/21 1120	04/02/21 1609	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		04/01/21 1120	04/02/21 1552	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		04/01/21 1120	04/02/21 1552	ECL
Aroclor-1260 (PCB-1260)	**70.2**	5.10	ug/L	10		04/01/21 1120	04/02/21 1609	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	473	Limit: 30-132	% Rec	1	**S1**	04/01/21 1120	04/02/21 1552	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	596	Limit: 30-132	% Rec	10	**S1**	04/01/21 1120	04/02/21 1609	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	26.9	Limit: 30-130	% Rec	1	**S2**	04/01/21 1120	04/02/21 1552	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	27.7	Limit: 30-130	% Rec	10	**S2**	04/01/21 1120	04/02/21 1609	ECL

Analytical Testing Parameters

Client Sample ID: 21458-A
Sample Matrix: Aqueous
Lab Sample ID: M1D0648-01 **Collection Date:** 04/08/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		04/12/21 1110	04/14/21 1554	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		04/12/21 1110	04/14/21 1554	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		04/12/21 1110	04/14/21 1554	ECL
Aroclor-1242 (PCB-1242)	**73.0**	5.00	ug/L	10		04/12/21 1110	04/14/21 1611	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		04/12/21 1110	04/14/21 1554	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		04/12/21 1110	04/14/21 1554	ECL
Aroclor-1260 (PCB-1260)	**100**	5.00	ug/L	10	**Q2**	04/12/21 1110	04/14/21 1611	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	191	Limit: 30-132	% Rec	1	**S1**	04/12/21 1110	04/14/21 1554	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	217	Limit: 30-132	% Rec	10	**S1**	04/12/21 1110	04/14/21 1611	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	43.0	Limit: 30-130	% Rec	1		04/12/21 1110	04/14/21 1554	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	72.3	Limit: 30-130	% Rec	10		04/12/21 1110	04/14/21 1611	ECL

Analytical Testing Parameters

Client Sample ID: 21459-A
Sample Matrix: Aqueous
Lab Sample ID: M1E0181-01 **Collection Date:** 05/04/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		05/10/21 1415	05/11/21 1948	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		05/10/21 1415	05/11/21 1948	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		05/10/21 1415	05/11/21 1948	ECL
Aroclor-1242 (PCB-1242)	**32.2**	5.00	ug/L	10		05/10/21 1415	05/18/21 1145	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		05/10/21 1415	05/11/21 1948	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		05/10/21 1415	05/11/21 1948	ECL
Aroclor-1260 (PCB-1260)	**39.8**	5.00	ug/L	10		05/10/21 1415	05/18/21 1145	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	165	Limit: 30-132	% Rec	1	**S1**	05/10/21 1415	05/11/21 1948	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	176	Limit: 30-132	% Rec	10	**S1**	05/10/21 1415	05/18/21 1145	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	15.7	Limit: 30-130	% Rec	1	**S2**	05/10/21 1415	05/11/21 1948	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	47.5	Limit: 30-130	% Rec	10		05/10/21 1415	05/18/21 1145	ECL

Analytical Testing Parameters

Client Sample ID: 21460-A
Sample Matrix: Aqueous
Lab Sample ID: M1E0178-01
Collection Date: 05/04/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		05/10/21 1415	05/11/21 1931	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		05/10/21 1415	05/11/21 1931	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		05/10/21 1415	05/11/21 1931	ECL
Aroclor-1242 (PCB-1242)	**115**	10.2	ug/L	20		05/10/21 1415	05/18/21 1128	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		05/10/21 1415	05/11/21 1931	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		05/10/21 1415	05/11/21 1931	ECL
Aroclor-1260 (PCB-1260)	**129**	10.2	ug/L	20		05/10/21 1415	05/18/21 1128	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	58.1	Limit: 30-132	% Rec	1		05/10/21 1415	05/11/21 1931	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	547	Limit: 30-132	% Rec	20	**S3**	05/10/21 1415	05/18/21 1128	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	86.9	Limit: 30-130	% Rec	1		05/10/21 1415	05/11/21 1931	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	05/10/21 1415	05/18/21 1128	ECL

Analytical Testing Parameters

Client Sample ID: 21461-A
Sample Matrix: Aqueous
Lab Sample ID: M1E0649-01
Collection Date: 05/07/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		05/14/21 1120	05/18/21 1622	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		05/14/21 1120	05/18/21 1622	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		05/14/21 1120	05/18/21 1622	ECL
Aroclor-1242 (PCB-1242)	**39.1**	5.10	ug/L	10		05/14/21 1120	05/18/21 1639	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		05/14/21 1120	05/18/21 1622	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		05/14/21 1120	05/18/21 1622	ECL
Aroclor-1260 (PCB-1260)	**45.8**	5.10	ug/L	10		05/14/21 1120	05/18/21 1639	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	362	Limit: 30-132	% Rec	1	**S1**	05/14/21 1120	05/18/21 1622	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	456	Limit: 30-132	% Rec	10	**S1**	05/14/21 1120	05/18/21 1639	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	17.8	Limit: 30-130	% Rec	1	**S2**	05/14/21 1120	05/18/21 1622	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	12.6	Limit: 30-130	% Rec	10	**S2**	05/14/21 1120	05/18/21 1639	ECL

Analytical Testing Parameters

Client Sample ID: 21462-A
Sample Matrix: Aqueous
Lab Sample ID: M1E1329-01
Collection Date: 05/25/2021 9:00

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		05/28/21 1000	05/28/21 1759	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		05/28/21 1000	05/28/21 1759	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		05/28/21 1000	05/28/21 1759	ECL
Aroclor-1242 (PCB-1242)	**31.4**	5.00	ug/L	10		05/28/21 1000	05/28/21 1817	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		05/28/21 1000	05/28/21 1759	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		05/28/21 1000	05/28/21 1759	ECL
Aroclor-1260 (PCB-1260)	**47.6**	5.00	ug/L	10		05/28/21 1000	05/28/21 1817	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	252	Limit: 30-132	% Rec	1	**S1**	05/28/21 1000	05/28/21 1759	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	268	Limit: 30-132	% Rec	10	**S1**	05/28/21 1000	05/28/21 1817	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	37.9	Limit: 30-130	% Rec	1		05/28/21 1000	05/28/21 1759	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	37.9	Limit: 30-130	% Rec	10		05/28/21 1000	05/28/21 1817	ECL

Analytical Testing Parameters

Client Sample ID: 21463-A
Sample Matrix: Aqueous
Lab Sample ID: M1F0762-01 **Collection Date:** 06/10/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		06/18/21 1045	06/22/21 1107	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		06/18/21 1045	06/22/21 1107	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		06/18/21 1045	06/22/21 1107	ECL
Aroclor-1242 (PCB-1242)	**1180**	50.0	ug/L	100		06/18/21 1045	06/22/21 1142	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		06/18/21 1045	06/22/21 1107	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		06/18/21 1045	06/22/21 1107	ECL
Aroclor-1260 (PCB-1260)	**1020**	50.0	ug/L	100		06/18/21 1045	06/22/21 1142	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	197	Limit: 30-132	% Rec	1	**S1**	06/18/21 1045	06/22/21 1107	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	542	Limit: 30-132	% Rec	100	**S3**	06/18/21 1045	06/22/21 1142	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	462	Limit: 30-130	% Rec	1	**S1**	06/18/21 1045	06/22/21 1107	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	06/18/21 1045	06/22/21 1142	ECL

Analytical Testing Parameters

Client Sample ID: 21463-A
Sample Matrix: Aqueous
Lab Sample ID: M1F1630-01
Collection Date: 06/24/2021 13:30

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		06/28/21 1045	06/29/21 1529	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		06/28/21 1045	06/29/21 1529	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		06/28/21 1045	06/29/21 1529	ECL
Aroclor-1242 (PCB-1242)	**68.9**	5.00	ug/L	10		06/28/21 1045	06/29/21 1604	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		06/28/21 1045	06/29/21 1529	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		06/28/21 1045	06/29/21 1529	ECL
Aroclor-1260 (PCB-1260)	**80.2**	5.00	ug/L	10		06/28/21 1045	06/29/21 1604	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	217	Limit: 30-132	% Rec	1	**S1**	06/28/21 1045	06/29/21 1529	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	298	Limit: 30-132	% Rec	10	**S1**	06/28/21 1045	06/29/21 1604	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	27.7	Limit: 30-130	% Rec	1	**S2**	06/28/21 1045	06/29/21 1529	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	40.2	Limit: 30-130	% Rec	10		06/28/21 1045	06/29/21 1604	ECL

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CERTIFICATE OF ANALYSIS

M1G0275

Analytical Testing Parameters

Client Sample ID: 21464-A
Sample Matrix: Aqueous
Lab Sample ID: M1G0275-01 **Collection Date:** 07/01/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		07/09/21 0923	07/12/21 1813	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		07/09/21 0923	07/12/21 1813	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		07/09/21 0923	07/12/21 1813	ECL
Aroclor-1242 (PCB-1242)	**941**	50.0	ug/L	100		07/09/21 0923	07/12/21 1848	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		07/09/21 0923	07/12/21 1813	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		07/09/21 0923	07/12/21 1813	ECL
Aroclor-1260 (PCB-1260)	**971**	50.0	ug/L	100		07/09/21 0923	07/12/21 1848	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	202	Limit: 30-132	% Rec	1	**S1**	07/09/21 0923	07/12/21 1813	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	401	Limit: 30-132	% Rec	100	**S3**	07/09/21 0923	07/12/21 1848	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	133	Limit: 30-130	% Rec	1	**S1**	07/09/21 0923	07/12/21 1813	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	07/09/21 0923	07/12/21 1848	ECL

CERTIFICATE OF ANALYSIS

M1G1218

Analytical Testing Parameters

Client Sample ID: 21465-A
Sample Matrix: Aqueous
Lab Sample ID: M1G1218-01 **Collection Date:** 07/19/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		07/23/21 1330	07/23/21 1832	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		07/23/21 1330	07/23/21 1832	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		07/23/21 1330	07/23/21 1832	ECL
Aroclor-1242 (PCB-1242)	**3050**	255	ug/L	500		07/23/21 1330	07/26/21 1223	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		07/23/21 1330	07/23/21 1832	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		07/23/21 1330	07/23/21 1832	ECL
Aroclor-1260 (PCB-1260)	**3110**	255	ug/L	500		07/23/21 1330	07/26/21 1223	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	495	Limit: 30-132	% Rec	1	**S1**	07/23/21 1330	07/23/21 1832	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	500	**S3**	07/23/21 1330	07/26/21 1223	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	162	Limit: 30-130	% Rec	1	**S1**	07/23/21 1330	07/23/21 1832	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	500	**S3**	07/23/21 1330	07/26/21 1223	ECL

Analytical Testing Parameters

Client Sample ID: 21468-A
Sample Matrix: Aqueous
Lab Sample ID: M1G1658-01 **Collection Date:** 07/27/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		07/30/21 1400	08/02/21 1338	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		07/30/21 1400	08/02/21 1338	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		07/30/21 1400	08/02/21 1338	ECL
Aroclor-1242 (PCB-1242)	**75.3**	5.00	ug/L	10		07/30/21 1400	08/02/21 1414	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		07/30/21 1400	08/02/21 1338	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		07/30/21 1400	08/02/21 1338	ECL
Aroclor-1260 (PCB-1260)	**65.4**	5.00	ug/L	10		07/30/21 1400	08/02/21 1414	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	300	Limit: 30-132	% Rec	1	**S1**	07/30/21 1400	08/02/21 1338	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	345	Limit: 30-132	% Rec	10	**S1**	07/30/21 1400	08/02/21 1414	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	42.5	Limit: 30-130	% Rec	1		07/30/21 1400	08/02/21 1338	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	122	Limit: 30-130	% Rec	10		07/30/21 1400	08/02/21 1414	ECL

CERTIFICATE OF ANALYSIS

M1H0821

Analytical Testing Parameters

Client Sample ID: 21469-A
Sample Matrix: Aqueous
Lab Sample ID: M1H0821-01
Collection Date: 08/12/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		08/16/21 0930	08/17/21 1340	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		08/16/21 0930	08/17/21 1340	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		08/16/21 0930	08/17/21 1340	ECL
Aroclor-1242 (PCB-1242)	**2900**	510	ug/L	1,000		08/16/21 0930	08/17/21 1510	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		08/16/21 0930	08/17/21 1340	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		08/16/21 0930	08/17/21 1340	ECL
Aroclor-1260 (PCB-1260)	**2980**	510	ug/L	1,000		08/16/21 0930	08/17/21 1510	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	79.3	Limit: 30-132	% Rec	1		08/16/21 0930	08/17/21 1340	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	1,000	**S3**	08/16/21 0930	08/17/21 1510	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	213	Limit: 30-130	% Rec	1	**S1**	08/16/21 0930	08/17/21 1340	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	1,000	**S3**	08/16/21 0930	08/17/21 1510	ECL

Analytical Testing Parameters

Client Sample ID: 21470-A
Sample Matrix: Aqueous
Lab Sample ID: M1H1269-01 **Collection Date:** 08/19/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		08/23/21 1420	08/25/21 1954	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		08/23/21 1420	08/25/21 1954	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		08/23/21 1420	08/25/21 1954	ECL
Aroclor-1242 (PCB-1242)	**38.6**	5.00	ug/L	10		08/23/21 1420	08/25/21 2012	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		08/23/21 1420	08/25/21 1954	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		08/23/21 1420	08/25/21 1954	ECL
Aroclor-1260 (PCB-1260)	**32.3**	5.00	ug/L	10		08/23/21 1420	08/25/21 2012	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	306	Limit: 30-132	% Rec	1	**S1**	08/23/21 1420	08/25/21 1954	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	314	Limit: 30-132	% Rec	10	**S1**	08/23/21 1420	08/25/21 2012	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	24.7	Limit: 30-130	% Rec	1	**S2**	08/23/21 1420	08/25/21 1954	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	19.1	Limit: 30-130	% Rec	10	**S2**	08/23/21 1420	08/25/21 2012	ECL

CERTIFICATE OF ANALYSIS

M1I0142

Analytical Testing Parameters

Client Sample ID: 21471-A
Sample Matrix: Aqueous
Lab Sample ID: M1I0142-01
Collection Date: 09/01/2021 13:10

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<50.0	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1221 (PCB-1221)	<50.0	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1232 (PCB-1232)	<50.0	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1242 (PCB-1242)	**1140**	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1248 (PCB-1248)	<50.0	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1254 (PCB-1254)	<50.0	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Aroclor-1260 (PCB-1260)	**1250**	50.0	ug/L	100		09/08/21 1500	09/10/21 1302	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	09/08/21 1500	09/10/21 1302	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	09/08/21 1500	09/10/21 1302	ECL

Analytical Testing Parameters

Client Sample ID: 21472-A
Sample Matrix: Aqueous
Lab Sample ID: M1I0358-01 **Collection Date:** 09/02/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<51.0	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1221 (PCB-1221)	<51.0	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1232 (PCB-1232)	<51.0	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1242 (PCB-1242)	**435**	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1248 (PCB-1248)	<51.0	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1254 (PCB-1254)	<51.0	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Aroclor-1260 (PCB-1260)	**507**	51.0	ug/L	100		09/08/21 1500	09/10/21 1431	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	09/08/21 1500	09/10/21 1431	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	09/08/21 1500	09/10/21 1431	ECL

Analytical Testing Parameters

Client Sample ID: 21473-a
Sample Matrix: Aqueous
Lab Sample ID: M1I1082-01 **Collection Date:** 09/15/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		09/17/21 0910	09/17/21 1916	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		09/17/21 0910	09/17/21 1916	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		09/17/21 0910	09/17/21 1916	ECL
Aroclor-1242 (PCB-1242)	**36.9**	5.10	ug/L	10		09/17/21 0910	09/17/21 1933	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		09/17/21 0910	09/17/21 1916	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		09/17/21 0910	09/17/21 1916	ECL
Aroclor-1260 (PCB-1260)	**28.1**	5.10	ug/L	10		09/17/21 0910	09/17/21 1933	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	87.4	Limit: 30-132	% Rec	1		09/17/21 0910	09/17/21 1916	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	107	Limit: 30-132	% Rec	10		09/17/21 0910	09/17/21 1933	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	13.0	Limit: 30-130	% Rec	1	**S2**	09/17/21 0910	09/17/21 1916	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	30.0	Limit: 30-130	% Rec	10		09/17/21 0910	09/17/21 1933	ECL

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CERTIFICATE OF ANALYSIS

M1J0194

Analytical Testing Parameters

Client Sample ID: 21474-A
Sample Matrix: Aqueous
Lab Sample ID: M1J0194-01
Collection Date: 10/01/2021 14:30

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/11/21 1050	10/14/21 1249	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/11/21 1050	10/14/21 1249	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/11/21 1050	10/14/21 1249	ECL
Aroclor-1242 (PCB-1242)	**200**	50.0	ug/L	100		10/11/21 1050	10/14/21 1306	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/11/21 1050	10/14/21 1249	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/11/21 1050	10/14/21 1249	ECL
Aroclor-1260 (PCB-1260)	**230**	50.0	ug/L	100		10/11/21 1050	10/14/21 1306	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	190	Limit: 30-132	% Rec	1	**S1, S4**	10/11/21 1050	10/14/21 1249	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	10/11/21 1050	10/14/21 1306	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	49.1	Limit: 30-130	% Rec	1		10/11/21 1050	10/14/21 1249	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	10/11/21 1050	10/14/21 1306	ECL

CERTIFICATE OF ANALYSIS

M1J1340

Analytical Testing Parameters

Client Sample ID: 21475-A
Sample Matrix: Aqueous
Lab Sample ID: M1J1340-01
Collection Date: 10/21/2021 14:00

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 1856	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 1856	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 1856	ECL
Aroclor-1242 (PCB-1242)	**86.5**	5.00	ug/L	10		10/25/21 1215	10/25/21 1913	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 1856	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 1856	ECL
Aroclor-1260 (PCB-1260)	**109**	5.00	ug/L	10		10/25/21 1215	10/25/21 1913	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	372	Limit: 30-132	% Rec	1	**S1, S4**	10/25/21 1215	10/25/21 1856	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	330	Limit: 30-132	% Rec	10	**S1, S4**	10/25/21 1215	10/25/21 1913	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	34.3	Limit: 30-130	% Rec	1		10/25/21 1215	10/25/21 1856	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	72.5	Limit: 30-130	% Rec	10		10/25/21 1215	10/25/21 1913	ECL

CERTIFICATE OF ANALYSIS

M1J1382

Analytical Testing Parameters

Client Sample ID: 21480-A
Sample Matrix: Aqueous
Lab Sample ID: M1J1382-01
Collection Date: 10/22/2021 9:30

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2005	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2005	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2005	ECL
Aroclor-1242 (PCB-1242)	**182**	5.00	ug/L	10		10/25/21 1215	10/25/21 2023	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2005	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2005	ECL
Aroclor-1260 (PCB-1260)	**76.7**	5.00	ug/L	10		10/25/21 1215	10/25/21 2023	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	195	Limit: 30-132	% Rec	1	**S1, S4**	10/25/21 1215	10/25/21 2005	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	279	Limit: 30-132	% Rec	10	**S1, S4**	10/25/21 1215	10/25/21 2023	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	281	Limit: 30-130	% Rec	1	**S1, S4**	10/25/21 1215	10/25/21 2005	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	471	Limit: 30-130	% Rec	10	**S1, S4**	10/25/21 1215	10/25/21 2023	ECL

Analytical Testing Parameters

Client Sample ID: 21481-A
Sample Matrix: Aqueous
Lab Sample ID: M1J1383-01
Collection Date: 10/22/2021 14:00

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2058	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2058	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2058	ECL
Aroclor-1242 (PCB-1242)	**55.0**	5.00	ug/L	10		10/25/21 1215	10/25/21 2115	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2058	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/25/21 1215	10/25/21 2058	ECL
Aroclor-1260 (PCB-1260)	**44.1**	5.00	ug/L	10		10/25/21 1215	10/25/21 2115	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	245	Limit: 30-132	% Rec	1	**S1, S4**	10/25/21 1215	10/25/21 2058	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	281	Limit: 30-132	% Rec	10	**S1, S4**	10/25/21 1215	10/25/21 2115	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	60.2	Limit: 30-130	% Rec	1		10/25/21 1215	10/25/21 2058	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	153	Limit: 30-130	% Rec	10	**S1, S4**	10/25/21 1215	10/25/21 2115	ECL

Analytical Testing Parameters

Client Sample ID: 21482-A
Sample Matrix: Aqueous
Lab Sample ID: M1K1202-01 **Collection Date:** 11/18/2021

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1832	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1832	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1832	ECL
Aroclor-1242 (PCB-1242)	**335**	25.0	ug/L	50		11/23/21 1335	11/26/21 1147	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1832	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1832	ECL
Aroclor-1260 (PCB-1260)	**361**	25.0	ug/L	50	**AC**	11/23/21 1335	11/26/21 1147	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	181	Limit: 30-132	% Rec	1	**S1**	11/23/21 1335	11/24/21 1832	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	50	**S3**	11/23/21 1335	11/26/21 1147	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	264	Limit: 30-130	% Rec	1	**S1**	11/23/21 1335	11/24/21 1832	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	50	**S3**	11/23/21 1335	11/26/21 1147	ECL

CERTIFICATE OF ANALYSIS

M1K1319

Analytical Testing Parameters

Client Sample ID: 21483-A
Sample Matrix: Aqueous
Lab Sample ID: M1K1319-01
Collection Date: 11/18/2021 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1849	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1849	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1849	ECL
Aroclor-1242 (PCB-1242)	**110**	10.0	ug/L	20		11/23/21 1335	11/26/21 1204	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1849	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		11/23/21 1335	11/24/21 1849	ECL
Aroclor-1260 (PCB-1260)	**140**	10.0	ug/L	20	**AC**	11/23/21 1335	11/26/21 1204	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	221	Limit: 30-132	% Rec	1	**S1**	11/23/21 1335	11/24/21 1849	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	20	**S3**	11/23/21 1335	11/26/21 1204	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	50.5	Limit: 30-130	% Rec	1		11/23/21 1335	11/24/21 1849	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	11/23/21 1335	11/26/21 1204	ECL

Analytical Testing Parameters

Client Sample ID: 21484-A
Sample Matrix: Aqueous
Lab Sample ID: M1L0769-01
Collection Date: 12/10/2021 11:00

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		12/20/21 1322	12/21/21 1652	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		12/20/21 1322	12/21/21 1652	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		12/20/21 1322	12/21/21 1652	ECL
Aroclor-1242 (PCB-1242)	**586**	51.0	ug/L	100		12/20/21 1322	12/21/21 1727	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		12/20/21 1322	12/21/21 1652	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		12/20/21 1322	12/21/21 1652	ECL
Aroclor-1260 (PCB-1260)	**704**	51.0	ug/L	100		12/20/21 1322	12/21/21 1727	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	152	Limit: 30-132	% Rec	1	**S1**	12/20/21 1322	12/21/21 1652	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	12/20/21 1322	12/21/21 1727	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	6430	Limit: 30-130	% Rec	1	**S1, S4**	12/20/21 1322	12/21/21 1652	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	12/20/21 1322	12/21/21 1727	ECL

Analytical Testing Parameters

Client Sample ID: 21485-A
Sample Matrix: Aqueous
Lab Sample ID: M1L1740-01
Collection Date: 12/28/2021 2:30

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1735	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1735	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1735	ECL
Aroclor-1242 (PCB-1242)	**153**	5.00	ug/L	10		01/04/22 1323	01/05/22 1752	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1735	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1735	ECL
Aroclor-1260 (PCB-1260)	**84.2**	5.00	ug/L	10		01/04/22 1323	01/05/22 1752	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	232	Limit: 30-132	% Rec	1	**S1, S4**	01/04/22 1323	01/05/22 1735	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	314	Limit: 30-132	% Rec	10	**S1, S4**	01/04/22 1323	01/05/22 1752	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	808	Limit: 30-130	% Rec	1	**S1, S4**	01/04/22 1323	01/05/22 1735	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	908	Limit: 30-130	% Rec	10	**S1, S4**	01/04/22 1323	01/05/22 1752	ECL

CERTIFICATE OF ANALYSIS

M1L1739

Analytical Testing Parameters

Client Sample ID: 21486-A
Sample Matrix: Aqueous
Lab Sample ID: M1L1739-01
Collection Date: 12/29/2021 11:55

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1642	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1642	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1642	ECL
Aroclor-1242 (PCB-1242)	**181**	50.0	ug/L	100		01/04/22 1323	01/05/22 1717	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1642	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		01/04/22 1323	01/05/22 1642	ECL
Aroclor-1260 (PCB-1260)	**282**	50.0	ug/L	100		01/04/22 1323	01/05/22 1717	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	200	Limit: 30-132	% Rec	1	**S1**	01/04/22 1323	01/05/22 1642	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	01/04/22 1323	01/05/22 1717	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	78.3	Limit: 30-130	% Rec	1		01/04/22 1323	01/05/22 1642	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	01/04/22 1323	01/05/22 1717	ECL

SECTION VI

VOLUME OF LTS EFFLUENT PRODUCED

Effluent Produced by Month in 2021
CECOS International, Williamsburg, Ohio

Month	Leachate Produced (gallons)
January	**35,600**
February	**39,240**
March	**15,300**
April	**30,600**
May	**20,400**
June	**20,400**
July	**20,400**
August	**30,700**
September	**15,300**
October	**10,200**
November	**40,700**
December	**25,500**
2021 Total	**304,340**